

# The Boston Medical and Surgical Journal

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June 1, 1922.

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### Original Articles.

#### AVULSION OF THE SCALP. REVIEW OF THE LITERATURE AND THE REPORT OF A CASE.

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In May, 1916, Miss I. C., aged 58, was caught by the hair in the revolving wheel of a shoe-stitching machine. Her entire scalp was torn off, as was also the upper part of both upper lids and the left ear, excepting the tragus, anti-tragus, and lobule. This left upper ear remained attached by a narrow pedicle posteriorly.

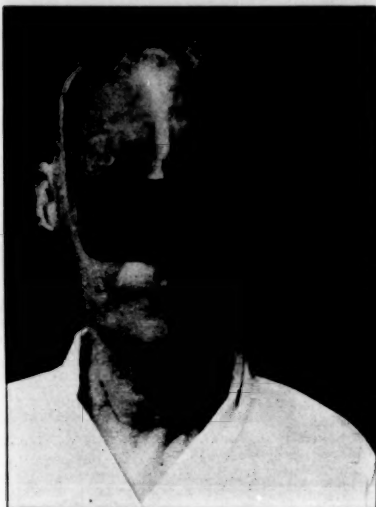
She was taken at once to a hospital in her home town where wet dressings were applied and hemostasis was effected. She did not lose consciousness at any time.

After nine weeks of wet dressings, a heterogenous Thiersch graft was transplanted to the

patient's vertex. This did not take. Reverdin autogenous grafts were then applied. This procedure was repeated about every ten days during the next three months, and most of these grafts took. In May, 1917, through June of same year, three plastic operations were done to relieve contractions of the eyelids. These operations consisted merely of lysis of scar without grafting.

She first entered the Massachusetts General Hospital in November, 1917. She then showed a head covered with a thin, shiny skin through which many blood-vessels showed and which was adherent to the skull and only slightly movable. The area of previous denudation extended from just below the eyebrows to just above the occipital protuberance. Laterally it reached to both ears. The left ear at its upper half was drawn back and bound down in scar tissue. Plastic operations were done by Dr. Porter on the ear and on both eyelids, restoring the former to its normal position and giving more freedom of movement to the latter. She was discharged, February 9, 1918.

It was noted during the time she was under observation that the scalp tended to intermittently lose considerable portions of skin from pressure or microbic invasion. The skin was tense and shiny, and by the middle of February, 1919, there were about a dozen areas, each about



Miss I. C.—Four weeks after the second trephining.

the size of a dime, which were superficially ulcerated and covered with a film of purulent material and crust.

In February, 1921, she again entered the hospital. The superficial ulcerations were increasing in number and the patient complained of a constant dull ache in her "eyeballs." Dr. Porter now made an attempt to get better vascularization of the scalp by drilling through the calvarium to the dura through five of the ulcerated areas in the frontal region. The skull was unusually thick and hard and there seemed to be no diploe. She left the following month and improved slightly for a while as regards the ulcerations, but entered the hospital again the following August, showing six large and ten small ulcerations. She now complained of a constant dull generalized headache and of a feeling of pressure so intense that she could not even bear to have her wig on. Eighteen holes about 1 cm. in diameter were now drilled as before, through the calvarium to the dura. There was very little operative reaction. During her convalescence her temperature occasionally rose to 100 F. One week after operation the headache had disappeared. In September she was discharged. The drill holes were irrigated with Dakin's, and healthy granulations soon appeared.

From that time until the first week in January, 1922, the scalp gradually healed. Each drill hole continued to suppurate until it dis-



Miss I. C.—Four weeks after the second trephining.



Ring of bone extruded from one of the frontal trephine holes.

charged a bit of necrotic bone, the necrosis resulting from the trauma of the drill used in the trephining. These pieces were sometimes complete bony rings. All previous symptoms have now disappeared and the patient declares she feels perfectly well. The scalp is almost completely healed and shows no tendency to break down.

Avulsion of the scalp occurs most often in women working in factories, whose long hair becomes caught in revolving machinery. There are five layers of the scalp—the skin, the subcutaneous fat, the epicranial aponeurosis, a layer of loose areolar tissue, and the pericranium. In cases of avulsion, the plane of separation is in the areolar tissue between the aponeurosis and the pericranium, and often portions of the pericranium are also torn away.

These cases may be treated by plastic oper-

ations or by skin grafting. Autogenous grafts are best, both Thiersch and Reverdin having fair success. The literature shows that the heterogenous grafts practically always fail, though Bevings' reports success with one case. Occasionally, if the scalp is not entirely avulsed and has a sufficient blood supply, it may be sutured back into place.

Bevings found in the *Philadelphia Medical and Physical Journal* the report of an avulsion of the scalp, in 1777. In this case the surgeon in charge, named Vance, ordered multiple trephining of the skull, apparently to the diploe, for he stated that he used a shoemaker's awl and that the time to quit boring was "when a reddish fluid appeared on the point of the awl." He declared that "proud flesh appeared to rise in these holes, but that it skun over slow."

Mellish<sup>9</sup> states that complete avulsion is sometimes attended with fatal hemorrhage and shock, and that the next danger is from infection.

A noteworthy feature is the length of time required to obtain healing. Gussenbauer had a case lasting for twenty months, owing to the continual breaking down of the cicatrices. Abbe, of New York, reported a case in which 12,000 grafts were planted in four years.

In 1915, Davison<sup>7</sup> trephined a skull in order to obtain healthy granulation tissue to cover over an area where the pericranium had sloughed. He drilled to the dura. The bone beneath had begun to undergo necrosis, but at the same time granulations had appeared through the two parietal foramina and to a slight extent through the suture line between the two parietal bones. This suggested that if there were enough foramina, there would be enough granulation tissue to cover the surface. He therefore drilled about fifty holes through the calvarium. Granulations soon appeared through the holes and spread rapidly over the denuded area.

Robinson<sup>8</sup> declares that the secondary breaking down of the healed areas occurs less often if the thick Wolfe-Krause grafts are employed. Grafts, he says, will grow readily on primary wound surface.

Davis<sup>9</sup> reports two cases of avulsion, in one of which, four years after the accident, the patient was constantly bothered with a sensation of a heavy weight pressing on the top of her head. The other case was grafted unsuccessfully with pigskin and lamb skin but was finally satisfactorily grafted according to the Thiersch method. There were marked hemorrhages in both his cases, but no shock in either.

Davis feels that the whole thickness grafts are the most satisfactory in the treatment of these cases. He gives some interesting historical data on avulsion, from which we quote rather freely. "The practice of scalping," he says, "was not uncommon among the Asiatics, Europeans and Africans, and is mentioned twice in

the Bible. The American Indians practiced scalping long before the advent of Columbus. The amount of scalp removed varied with the tribe.

"The first case of scalping due to machinery, recorded in medical literature, is that of Downs, which occurred on June 23, 1838. Netolitzki was the first to employ grafts in the treatment of scalping. . . ."

He then describes a series of experiments by Fouchard on the cadaver, from which he concludes that the tearing of the scalp is produced by a sudden violent traction, which is exerted obliquely from front to back, the superciliary ridges acting as the cutting instrument, and the skin is cut by them where it is the thinnest.

Davis, in 1910, summarized ninety-two cases of total avulsion and thirty cases of partial avulsion, totalling one hundred and thirty-two. He suggests the transplanting of hair-bearing skin in certain selected cases. With the Reverdin grafts, he thinks there is more likelihood of contraction than by Thiersch's method.

Law<sup>9</sup> says that when the skull is laid bare there is frequently necrosis and exfoliation of the outer table, granulations forming in the vascular diploe and lifting up the thin layer of bone above. He reports the successful grafting of a granulating skull with amniotic membrane after drilling holes through the skull to the diploe.

In 1914 Müller<sup>10</sup> reported a case of total avulsion and added eighteen others which had been collected by Myata and von Enz, thus bringing the total number of cases of avulsion up to one hundred and forty-one.

Exclusive of the cases reported by Davis, Müller, Myata, and von Enz, we have found twenty-six others in the literature.

Case 142. Byron, 1912, Calif. M. & S. Reporter, Vol. 8, p. 333.

Case 143. Kirmisson, 1912, Bull. et Mém. Soc. de Chir., Paris, Vol. 38, p. 164.

Case 144. Grondahl, 1912, Krist. Kirurg, p. 16.

Case 145. Northrop, 1912, Hahnemann Monthly, Vol. 48, p. 666.

Case 146. } Painetvin, 1912, Bull. et Mém. Soc. de  
through } Chir., Paris, Vol. 48, p. 25.

Case 152. Chepmell, 1913, Lancet, Vol. 1, p. 78.

Case 153. Scott, 1913, Railway Surg. Jour., Vol. 20, p. 54.

Case 154. Luxembourg, 1913, Münsch. m. W., Vol. 60, p. 2759.

Case 155. Vorkurjeff, 1913, Khirurg. Arkh. Velya, Vol. 20, p. 379.

Case 156. Berárd, 1914, Lyon Méd., Vol. 122, p. 540.

Case 157. Flaherty, 1914, Ann. Surg., Vol. 59, p. 186.

Case 158. Gillette, 1914, N. Y. Med. Jour., Vol. 99, p. 1135.

Case 159. Law, 1914 (See above).

Case 160. Landry, 1914, N. Orl. M. & S. J., Vol. 67, p. 782.

Case 161. Nuzum, 1915, Journ. A.M.A., Vol. 64, p. 1238.

Case 162. Sheinberg, 1916, N. Y. Med. Rec., Vol. 90, p. 788.

- Case 163. Perthes, 1917, *Münch. m. W.*, Vol. 64, p. 1340.
- Case 164. Durham, 1919, *Long Island Med. Journ.*, Vol. 13, p. 63.
- Case 165. Geinitz, 1919, *Beitr. z. Chir. Tüb.*, Vol. 123, p. 252.
- Case 166. Morone, 1919, *Clin. Chir. Milano N. S.*, Vol. 1, p. 918.
- Case 167. Schönbauer, 1920, *Wien. klin. Woch.*, Vol. 23, p. 180.

There have been nine cases of avulsion of the scalp at this hospital since 1872. In one case there was loss of consciousness for a short time. Several had pain immediately after the accident and one case cried out every time the dressings were done for several weeks. Periosteal defects were mentioned in two cases. Heterogenous grafts were used three times and were total failures. Autogenous grafts had more success as we came to the later periods, due to improvement in the technique. Thiersch and Reverdin were equally successful. In three cases, one or both eyebrows were torn off and in only two cases is a note made of hemorrhage. No mention is made of exfoliation of bone. One ear was partially torn off in two cases. Mention is made in only two cases of late retraction of the eyelids due to scar. In practically all the cases that were followed, there have been secondary ulcerations. Mention is made in only one case of headache occurring late, or of a sense of pressure. Though the literature mentions tetanus as a rare complication, this series had no serious infections. No plastic operations were attempted to cover the scalp, though some were employed to relieve contraction of the eyelids. In six cases, the scalp was completely avulsed. These six were all women who worked in factories and whose hair had been caught in revolving machinery. The three others were men who were injured, respectively, in a railroad accident, a fall from a scaffolding, and an elevator accident. With the men, the scalp was completely avulsed. Healing occurred in all three cases without grafting, though one of these cases was complicated by considerable sepsis. In the case of two of the women, the scalp was replaced, but in both instances it sloughed and grafts had to be employed. Wolfe grafts were apparently not attempted. There was one death in the series from pulmonary embolism and one case gave the picture of shock.

## REFERENCES.

- <sup>1</sup> Haubold: *Jour. A.M.A.*, vol. 48, p. 1429.
- <sup>2</sup> Keen: *Surgery*, vol. 1, p. 892.
- <sup>3</sup> Durham: *L. I. Med. Jour.*, vol. 13, p. 2.
- <sup>4</sup> Mellish: *Ann. Surg.*, vol. 40, p. 644.
- <sup>5</sup> Bering: *Phil. Med. Jour.*, vol. 9, June 7.
- <sup>6</sup> Robinson: *Surg., Gyn., and Obst.*, vol. 7, p. 633.
- <sup>7</sup> Davison: *Jour. A.M.A.*, vol. 70, p. 1365.
- <sup>8</sup> Davis: *Ann. Surg.*, vol. 52, p. 721.
- <sup>9</sup> Law: *Surg., Gyn., and Obst.*, vol. 19, p. 229.
- <sup>10</sup> Müller: *Beitr. z. Klin. Chir. Tüb.*, vol. 94, p. 10.

## TRAUMATIC OSTEITIS OF THE WRIST.

BY MARK H. ROGERS, M.D., BOSTON.

THERE is a condition that involves one of the carpal bones of the wrist, either the semi-lunar or the scaphoid, which has not yet received sufficient attention so that it is known under any one name. This condition seems to be a very definite entity and has been described by two observers in careful and complete detail, namely, Preiser<sup>1</sup>, who reports five cases in 1910, and Guie<sup>2</sup>, who reports seven cases in 1914. Guie also reports 29 cases from other clinics, and gives a good bibliography, but the bibliography deals with other conditions of the wrist such as fracture. I have not met with any literature on the subject since that date, so that probably very few observations have been made. Kellogg Speed mentions the subject in his textbook on fracture, and this is about the only textbook that does call attention to it.

Preiser calls the condition a rarefying osteitis of an isolated carpal bone, and believes that it is the result of trauma. When he was studying the subject he made careful observations concerning the anatomy of the carpal bones, especially in relation to the nutrient artery, and he believes that a slight injury may block the nutrient artery and cause the absorption of the bone, which is the most prominent pathological condition. Guie considers the condition as essentially a compressed fracture, which is not recognized at first, with the secondary absorption of bone structure. This is somewhat analogous to a compressed fracture of the spine, or the so-called Kümmell's disease, in which the symptoms develop late and in which the x-ray shows a loss of substance of the cancellous bone six months after the original injury.

Two x-ray reports have suggested a similarity of this condition with the well-known Kohler's disease of the scaphoid of the foot in the x-ray findings, but Kohler's disease is confined to children and tends to normal recovery, while this condition is evidently most common in young adults, and probably does not recover spontaneously.

This condition is often mistaken and treated for such condition as tuberculosis, infectious arthritis or, if there is a traumatic history, fracture. The gradual onset without a clear-cut etiological background, and an x-ray that suggests a destructive process, certainly would lead one to consider tuberculosis as a very possible condition. Without a knowledge that there is such a condition as here described, it is certainly reasonable to suppose that we are dealing with a destructive bone disease. A case was recently examined, who had had two operations on the wrist, with removal of a semilunar bone, and a secondary operation for



removal of more bone, because there was a certain amount of stiffness of the wrist and because the x-ray shows what was called "bone disease." I am quite sure, from the history of the case and its course, that the case was similar to these reported cases, and that the surgeon was operating because he thought the bone was the seat of some kind of an infectious process.

The symptoms are rather clear-cut in my cases and correspond to Preiser's and Guie's cases. The onset of symptoms is very gradual, generally covering a period of a few months before they are thoroughly considered. There is a definite pain referred to the wrist-joint which is brought on by use and diminishes with rest. There is a slight amount of swelling which increases with use and with time. Localized tenderness is present and is quite definite in that it is directly over the bone involved. The limitation of motion is at first almost wholly in dorsiflexion of the wrist.

The amount of disability that these cases present is very definite. There is no question but that they have comparatively little trouble as long as they do not use the wrist, but just as soon as they return to a mechanical occupation, the symptoms recur and they are required to stop work. This corresponds very closely to the reported cases in the literature.

CASE 1. Examined at the Public Health Service Hospital at Boston. Age 23. Mechanic. Complains of swelling and pain of the wrist. About nine months preceding the examination he began to have trouble with the wrist, very

slight at first. Gradually the pain and disability have increased so that he is not able to work as a mechanic. During the first few months he was able to work part of the time, and a few days' rest would be sufficient to bring the wrist back to normal. For the last three months he has had continuous treatment by physiotherapy and rest, with the result that as long as he does not use the wrist, the pain and swelling are very slight, but both come back on use.

He states that two years previous to the onset of his present symptoms, while in service, he sprained his wrist. This was treated by the application of tincture of iodine, but no immobilization. It was quite evident that the injury was not considered of any consequence, because he kept on with his duties, and no x-ray was taken. He evidently worked continuously for a year after his discharge from service, although he says that his wrist was weak.

There is no history of gonorrhea nor other focal infection. The Wassermann test was negative. The examination is negative, except for the wrist-joint.

The wrist shows a slight swelling, especially over the dorsum of the wrist, extending towards the knuckle. No local heat. Tenderness to deep pressure over the head of the radius and scaphoid. The motions are free, except in dorsiflexion, which is distinctly limited and painful.



CASE 1.—Note the loss of bone substance of scaphoid.



CASE 2.—The scaphoid shows a change in shape and substance.

The x-ray shows a pathological process involving the scaphoid. There is loss of substance of the central portion and a "crinkled" appearance of the contour.

CASE 2. J. B. Male. Age 25. Seen at the Massachusetts General Hospital. Gradual onset of pain in the right wrist, of six months' duration, which at the present time is severe enough so that he cannot work as a mechanic. He knows of no definite injury, although he says that he has often hurt his hand playing semi-professional ball. Close questioning failed to make any connection between a single injury and his present condition.

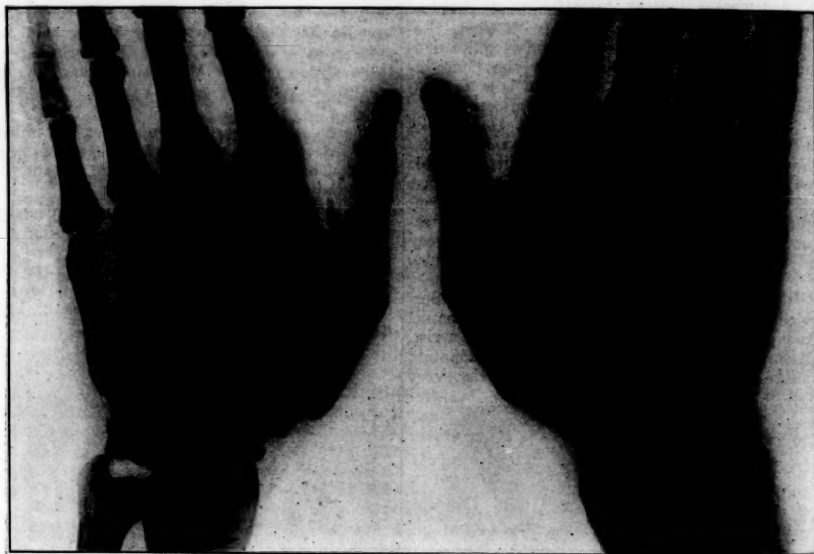
The examination shows a wrist slightly

army. There is a history of injury, but not a very definite one, and not directly connected with the present trouble. As long as he does not use his wrist he has no pain, but just as soon as he works there is a definite increase in the symptoms of pain, swelling and limitation of motion.

The examination is negative except for the wrist. There is a slight amount of swelling of the wrist-joint, with localized tenderness over the semilunar, and limitation of motion.

The x-ray shows a condition similar to that of Case 2.

CASE 4. M. Age 20. Female. Occupation, housework. Examined on the Orthopedic Ser-



CASE 3.—Note the size of the semilunar.

swollen, with limitation of motion, especially dorsiflexion, and tenderness over the semilunar. There is no focal history. The Wassermann test is negative.

The x-ray presents a lesion of the semilunar. It is smaller in appearance, irregular in outline, and there is a change in the internal structure of the bone. There is also a loose fragment of bone at the base of the first metatarsal, as if there had been a fracture.

CASE 3. F. R. Male, 27. Seen at the Public Health Hospital. Gradual onset of symptoms of pain and stiffness of the wrist. The symptoms developed after discharge from the

vice of the Massachusetts General Hospital. For about six months she has been complaining of soreness of the wrist, especially on lifting and heavy work. There has been very little swelling, but there is a definite localized tenderness over the semilunar. There is some restriction of motion, especially dorsiflexion. It is impossible to obtain any history of injury in this case.

The x-ray shows a typical "crinkled" appearance of the semilunar, making it appear smaller than the normal, with a changed appearance of the internal architecture.

The relation of a definite trauma in these four cases has not been very clear-cut or con-



CASE 4.—The semilunar is smaller than normal and irregular in outline.

tinuous. When we have the word of the patient that he sprained his wrist, there immediately has been a period of time practically without symptoms, and then a gradual development of symptoms. Guie was able to obtain a history of trauma in most of his cases, but he calls attention to the late development of symptoms. In Case 4 there was no history of an injury. In Case 2 it is reasonable to suppose that there has been an injury, on account of the evident old fracture of the first metacarpal, but he cannot place any connection with his present condition. Cases 1 and 3 certainly claimed an injury, but these were service cases, and it is natural for them to make the most of any previous injury.

The three semilunar and the scaphoid were excised, using the dorsal incision. All the specimens were examined pathologically and no evidence of tuberculosis was found. Also, on operation, there was no evidence of any pathological process in the bones or in the soft parts. A good deal of care was used in removing the semilunar in Case 4, not to pick up the bone with forceps, so as to have a specimen that was not crushed. The bone was sectioned *in toto*, and we were able to obtain a good picture of the bone structure. In the first three cases, attention was paid only to the question of the possibility of tuberculosis or osteomyelitis. A section of Case 4 shows that the cortex is definitely thinned and that the medulla is composed of much more fat tissue than the normal and that there is a loss of the normal bony trabeculae. There was no evi-

dence of tuberculosis or chronic inflammatory tissue.

The two cases at the Public Health Hospital were treated for at least two months by conservative measures, physiotherapy and rest. Just as soon as they began to make use of their wrists as they would in their normal work, the symptoms recurred. This fact is reported by Guie, who states that the process is difficult to treat, because of the length of time during which disability lasts, and because of the recurrence of symptoms.

For this reason it seems best to excise. These cases are too few to be too definite about treatment, but I believe that this is a necessary step to take. Of course, an excision of the affected bone is likely to be done, because it is considered possible that we are dealing with disease, most likely tuberculosis. The question really is, whether the result is better after an excision than we can get by prolonged partial fixation. It is probable that there is a slight loss of motion following this operation, although if the work is done very carefully, without disturbing the rest of the joint, and by getting the bone out intact, so as not to leave part to form new bone, we ought to get good results. I know the end-result of Cases 2 and 4. Case 2 has lost a few degrees of both plantar and dorsiflexion, but seems to have a serviceable wrist. Case 4 appears to have a perfect wrist, as far as motions are concerned, and function is perfect. This case was operated upon early relative to the duration of symptoms, and has the best result.

As far as the name to be applied to this condition is concerned, it is rather difficult to apply one that gives a proper picture. It is an absorption of the bone structure, probably secondary to trauma, and therefore I rather like the name, if it were not so clumsy, of Traumatic Osteitis of the Wrist.

#### REFERENCES.

- <sup>1</sup> Fortschritte auf d. Geb. d. Roentgenstr., 15, Heft 4.  
<sup>2</sup> Deutsch. Ztschr. f. Chir., Leipzig, cxxx.

### THE TRANSPERITONEAL CERVICAL CESAREAN SECTION. REPORT OF CASES.

BY LOUIS E. PHANEUF, M.D., F.A.C.S., BOSTON,

AND  
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ON December 20, 1919, we had the opportunity to see, at St. Elizabeth's Hospital, a primipara 23 years old, at term; she gave a history of severe uterine hemorrhage with pain. Her family physician had diagnosed the condition as placenta previa and had packed the vagina before sending her to the hospital. On admission the pack, which was found to be saturated with blood, was changed by the house

officer in charge. Later, a manual dilatation of the cervix was attempted, without success, because of the marked rigidity of the organ.

When seen, a few hours after admission, the patient was blanched, her pulse was of poor quality and ranged between 140 and 150 in rate, the uterus was tense and the fetal heart tones were not heard. We made a diagnosis of abruptio placentae and felt that the parturient should be delivered at once.

The vaginal route was discarded because the size of the child made vaginal cesarean section undesirable; the former unsuccessful attempt at manual dilatation precluded repeating this procedure; while the gravida's condition contraindicated the bag and the necessary hours for dilatation by this method. The classical cesarean section was not considered because of the danger of peritonitis following the vaginal examinations, the vaginal tamponade and the attempt at manual dilatation of the cervix.

The transperitoneal cesarean section was thought to be the operation which would give the patient the best possible chance and it was performed as soon as she could be prepared. The recovery from ether was satisfactory, the puerpera was free from discomfort, she had no distention and no sign of peritoneal irritation. Her evening temperature remained at 100. On December 29, 1919—nine days after operation—the uterine incision broke down and an ounce of thick, green pus escaped through the lower end of the abdominal incision. The sinus was irrigated with salt solution, the fluid escaping for the most part through the cervix and vagina. The amount of pus from the uterine cavity at first increased but after a few days began to subside and the sinus closed gradually.

On January 21, 1920, at the time of the patient's discharge, the following note was made: "The incision is well healed throughout, there is no induration or tenderness. Vaginal Examination—The cervix is closed and in good position, the uterus is small, in good position, and freely movable; the adnexa are normal, the parametria are non-sensitive, and there are no masses or areas of tenderness in the pelvis."

The impressive fact about this case was that while the uterus was septic and draining pus freely, through the abdominal incision, no sign of peritoneal involvement was apparent, the bowels and bladder functioned normally, the patient's appetite was good and she was on a solid diet.

Later, in the Carney Hospital Clinic, we had the opportunity of comparing the results of the classical or corporeal cesarean section and the transperitoneal cervical cesarean section on two patients operated on a day apart. The first patient, a young primipara in excellent

health, was followed throughout her pregnancy at the Prenatal Clinic of the hospital; she was seen every two weeks, and at no time were there any complications. She was operated on at term for a pelvic indication, a classical cesarean section being done; the abdominal incision was made above the umbilicus and the uterine incision in the fundus. She had had about two hours of labor, or the time necessary for her coming to the hospital and be prepared for operation after the onset of labor; her pulse was 80 on admission, she had had no vaginal examinations during her observation in the clinic and none before operation. This patient was then in excellent physical condition, was not examined vaginally, had intact membranes and was operated on at the onset of labor. She left the table in good condition, made a good ether recovery, and although she never was in a serious condition, she had a rather stormy convalescence. The temperature went as high as 101.6 and the pulse remained at 140 for 48 hours; she had considerable peritoneal shock and partial paralytic ileus; the latter was controlled by frequent enemata after three days; from then on, the puerperium was uneventful and she was discharged well.

The second patient, a primipara, 40 years old, was admitted to the Carney Hospital with a complete placenta previa and a moderate hemorrhage. The abdominal examination revealed a pregnancy at term; she had been examined vaginally in her home before being sent to the hospital (she stated that the physician who had examined her had not worn gloves); she had recently recovered from influenza, was emaciated and in very poor physical condition. Because of her age and her great anxiety for a living child, the transperitoneal cesarean section was chosen rather than the bag and delivery through the parturient canal. Her convalescence was that of a normal delivery; the temperature remained normal, the pulse never went above 80, there was no distention, catheterization was not necessary, and the bowels moved normally. The puerpera nursed her child and was discharged well.

The convalescence of the transperitoneal operation is practically that of a normal delivery. The patients are free from ileus and distention, the temperature and pulse remain near the normal line, and no signs of peritoneal shock are observed. There are surprisingly few bladder symptoms, and catheterization is the exception rather than the rule.

The operation was devised by Veit and Fromme, and by Barton Cook Hirst working independently; the latter has popularized it in America. Hirst, in his *Atlas of Operative Gynecology*, states: "This method is comparatively simple; and the result has proved (in my experience) that it is reliable, preventing infection of the peritoneal cavity, especially

during puerperal convalescence, which is the chief danger of cesarean section performed upon the presumably infected woman, the infection of the endometrium in such cases spreading directly through the uterine wound to the peritoneal surface and rapidly causing a general septic peritonitis."

Because of more comfortable convalescence and the consequent lessened risk of peritonitis, resulting from extraperitoneal approach, we have adopted it as the operation of choice when a cesarean section is indicated.

#### TECHNIC OF OPERATION.

The abdomen is prepared and the patient is catheterized; she is then etherized and placed in a moderate Trendelenburg position. The operator stands on the left as in the average pelvic operation; the incision which is median and about five inches long, starts at the symphysis and extends towards the umbilicus; the parietal peritoneum is opened in the median line, exposing the bladder and the lower uterine segment (intestines are practically never seen). The uterine peritoneum just above the bladder, where it is loosely attached, is incised to the uterine muscle; the index finger is introduced in the opening and the bladder is separated from the uterus; the finger is then directed upwards and the peritoneum is separated from one side of the uterus, the procedure is repeated on the opposite side. The visceral peritoneum is then incised in the median line to within an inch of the upper limit of the incision in the parietal peritoneum, and the two layers of peritoneum—parietal and visceral—are united by carefully applied inter-

rupted catgut sutures, six to eight in number. The bladder is held under the symphysis by means of a retractor and an incision is made in the cervix (an incision large enough to deliver an ordinary-sized child may be made entirely in the cervix, without encroaching on the corpus); the child is usually delivered by the vertex, using the obstetric forceps to assist in the delivery. The placenta and membranes are extracted, a large strip of gauze is packed in the uterus, and 1 cc. of pituitary extract and of aseptic ergot are administered. The cervical incision is closed with interrupted sutures of No. 2 chromic catgut, and the strip is removed before tying the sutures; the uterus is usually contracting well at this time. After sponging out the uterine incision, the peritoneal layers are further approximated by a continuous suture of No. 0 chromic catgut. As may be seen, the uterine incision is now entirely out of the general peritoneal cavity, and covered almost entirely by the bladder; the conjoined layers of peritoneum are united in the median line by two or three interrupted catgut sutures, and the abdominal wall is closed in the usual manner.

The layers of peritoneum are adherent in the course of a few hours; uterine sepsis usually is apparent at the end of twenty-four to forty-eight hours, as shown by the rise of temperature and pulse, at this time, in infected cases. If infected, lochia seeps through the uterine incision; it can be drained readily through the lower end of the abdominal wound without coming in contact with the general peritoneal cavity.

Cases No. 1, No. 16, No. 18, No. 19, in which

CASE 16.—Clinical Chart. Date admitted, Dec. 26, 1920.





the uterine incision broke down and in which a sinus existed between the vagina and abdominal wall with free discharge of pus from the uterine cavity, seem to prove that the operation offers protection against general peritonitis. Case No. 16, whose chart is shown elsewhere, seems to especially substantiate this.

Further, since the cervix is the non-contractile part of the uterus, and since immobilization of a part is an essential in its healing, it seems logical that an incision in the cervix should heal more readily than one in the fundus or the body of the uterus where the opposed surfaces are apt to be disturbed by the contraction and relaxation of the organ following delivery. This should tend to decrease the possibility of rupture in subsequent pregnancies.

In certain cases where previous pelvic operations had been done, it was not always possible to separate the visceral peritoneum readily because of adhesions; in this class of patients the technic described by Krönig has been followed.

The patient is placed in the Trendelenburg position; the abdominal incision is made as in the transperitoneal operation; the peritoneum is incised where it is loosely attached and the bladder is separated as in a panhysterectomy; it is now held under the symphysis by a retractor and a cervical incision is made; after the delivery of the child, the placenta and membranes are extracted, and the incision is closed with interrupted sutures of No. 2 chromic catgut; the bladder edge is readily sutured to its original position by means of a continuous catgut suture and the abdomen is closed in the usual way.

The incision in the cervix is entirely covered by the bladder, and should infection occur, drainage may be easily established through the cervix or by an anterior vaginal colpotomy.

The cases in the following table are reported from our clinics at the Carney and St. Elizabeth's hospitals, as well as from our private practices.

There were forty cervical cesarean sections in this series, thirty-three transperitoneal, and seven Krönig operations. The latter cases, with the exception of No. 2, were clean; they were free from complications and had uneventful recoveries. Case No. 2 developed pulmonary embolism on the table; this was followed by pneumonia, and although she was critically ill for a number of days, she made a complete recovery and was discharged well.

Of the thirty-three transperitoneal operations, there were nine septic, twenty-one clean cases, and three deaths. The puerperium in the clean cases was as near ideal as it can be following an abdominal section. These patients were free from peritoneal shock and paralytic ileus, and the bowels, as well as the bladder, functioned normally. The convalescence, as a

whole, resembled more closely that of a normal delivery than that of a cesarean section. Two of the clean cases had complications—Case No. 3 developed a right mammary abscess late in the puerperium, while Case No. 10 had a severe pyelitis on the tenth day.

The nine septic cases may be divided into three groups. The first includes Cases No. 12 and No. 25, where there was superficial infection and breaking down of the abdominal incision. Case No. 25, in addition, developed a broncho-pneumonia on the fifteenth day. All complications responded readily to treatment. The second group consists of Cases No. 14, No. 17, and No. 20, where we found a mild uterine infection without abdominal symptoms, while the third group consists of Cases No. 1, No. 16, No. 18, and No. 19. In these patients there was a severe uterine infection with breaking down of the uterine incision and free discharge of pus through the abdominal wall. Drainage was easily established, a drainage tract being formed between the abdominal wall and the vagina, so that in irrigating these wounds, part of the fluid escaped through the vagina and part came back through the abdominal opening. These cases were irrigated with Dakin's solution every four hours; the incisions healed rapidly, and they were discharged well. Had these patients been operated on by the classical method, without a ready exit for the purulent discharge, we are convinced that they would have died of septic peritonitis.

Case No. 16 was one of extreme sepsis, the whole cervical incision broke down, and one could introduce the sterile fingers through the abdominal opening into the fundus as well as into the cervix. Her hemoglobin had come down to 30 per cent; after transfusion of 600 cc. of blood, she gradually gained, and was discharged well on the fifty-second day. The chart which follows gives an idea of the extent of the sepsis.

These cases tend to prove that the union of the peritoneal layers in the transperitoneal operation offers a definite protection against peritonitis. While the four cases had broken down uterine incisions and a free purulent discharge from the uterus, no sign of peritoneal involvement was apparent, the patients were eating well and were comfortable.

There were three maternal deaths in this series: the first case, No. 24, died of pulmonary embolism on the fifth day; the second case, No. 29, died of acute dilatation of the stomach on the fourth day, while the third case, No. 33, died of hemorrhage and shock because of a prematurely detached placenta. These deaths can hardly be attributed to the operation, since the causative factors in the first two may occur after any laparotomy, while abruptio placentae, with hemorrhage, is one of the grave accidents of pregnancy. All the septic cases recovered

## TRANSVAGINAL CERVICAL CESAREAN SECTIONS.

No.	Name	Para.	Date	No. of Sections	Indications	Convalescence	Sex of Child	Condition on Discharge	Mother Baby
1	Mrs. M.E.S.	I	Dec. 20-19	First	Abruptio Placentae, Hemorrhage, Rigid Cervix.	Septic Utero-Abdominal Fistula.	Male	Well	Stillborn
2	Mrs. M.C.	II	June 4-20	First	Central Placenta Previa	Clean, Unventful.	Male	Well	Well
3	Mrs. M.B.D.	I	June 12-20	First	Disproportion, Rigid Cervix.	Clean, Unventful, Breast Abscess Right.	Male	Well	Well
4	Mrs. J.R.	I	June 13-20	First	Pelvic, Floating Head, Rigid Cervix.	Clean, Unventful.	Male	Well	Well
5	Mrs. M.D.	I	June 24-20	First	Eclampsia, Rigid Cervix.	Clean, Unventful.	Female	Well	Well
6	Mrs. M.L.	I	July 17-20	First	Justo-minor Pelvis, Tenuia.	Clean, Unventful.	Male	Well	Well
7	Mrs. E.H.	I	July 22-20	First	Justo-minor Pelvis, Floating Head.	Clean, Unventful.	Male	Well	Well
8	Mrs. M.S.	II	July 31-20	Second	Previous Classical Cesarean Section.	Clean, Unventful.	Male	Well	Stillborn Inoculated.
9	Mrs. F.F.	I	Aug. 24-20	First	Complete Placenta Previa.	Clean, Unventful.	Male	Well	Well
10	Mrs. E.G.	I	Aug. 28-20	First	Justo-minor Pelvis, Floating Head.	Clean, Pyelitis.	Female	Well	Lived Twelve Hours.
11	Mrs. E.H.	I	Nov. 12-20	First	Complete Placenta Previa.	Clean, Unventful.	Male	Well	Well
12	Mrs. E.B.	I	Nov. 17-20	First	Complete Placenta Previa, Packed Six Times.	Superficial Sepsis.	Male	Well	Well
13	Mrs. R.L.	I	Dec. 8-20	First	Eclampsia.	Clean, 36 P.P. Convulsions.	Female	Well	Well
14	Mrs. M.C.	I	Dec. 15-20	First	Disproportion.	Temp. 101 for 8 days, No abdominal symptoms.	Male	Well	Well
15	Mrs. I.B.	I	Dec. 23-20	First	Floating Head, Large Child.	Clean, Unventful.	Male	Well	Well
16	Mrs. J.M.	I	Dec. 26-20	First	Justo-minor Pelvis, Large Child, Dry Uterus, 36 hours in labor.	Septic Utero-abdominal Fistula.	Female	Well	Well
17	Mrs. M. St.G.	I	Jan. 2-21	First	Disproportion, Contracted Outlet.	Mild uterine infection, No abdominal symptoms.	Male	Well	Well
18	Mrs. K.O.	I	Feb. 9-21	First	R.O.P. Floating Head, Long labor, Vaginal Examinations.	Septic Utero-abdominal Fistula.	Male	Well	Well
19	Mrs. M.D.	I	Feb. 9-21	First	Justo-minor Pelvis, Floating Head.	Septic Utero-abdominal Fistula.	Female	Well	Well
20	Mrs. E.B.	I	Feb. 28-21	First	Disproportion.	Temp. 101-102 for 4 days, No abdominal symptoms.	Female	Well	Well
21	Mrs. A.C.	I	Mar. 4-21	First	Disproportion, Eclampsia.	Clean, Unventful.	Male	Well	Well
22	Mrs. J.L.	I	Mar. 7-21	First	Flat Pelvis, Long labor.	Clean, Unventful.	Female	Well	Well
23	Mrs. A.K.	II	Mar. 28-21	Second	Previous Section For Abruptio Placentae and Spontaneous Rupture of Uterus.	Clean, Unventful.	Female	Well	Well
24	Mrs. M.A.	VII	April 7-21	First	Spondylolisthetic Pelvis, Six Stillborns following High Forceps.	Died of Pulmonary Embolism on 5th day.	Male	Died	Well
25	Mrs. M.W.	II	June 14-21	Second	Previous Classical Cesarean Section.	Superficial sepsis of incision, Broncho-Pneumonia	Female	Well	Well
26	Mrs. J.K.	X	June 14-21	First	Complete Placenta Previa, 3 Vaginals, Packed at home.	Clean, Unventful.	Male	Well	Well
27	Mrs. A.C.	I	June 27-21	First	Disproportion, 16 hours in labor.	Clean, Unventful.	Female	Well	Well
28	Mrs. J.C.	I	June 29-21	First	Cardiac Disease, Contracted Outlet	Clean, Unventful.	Male	Well	Well
29	Mrs. M.S.	I	July 18-21	First	41 years old, Floating Head, 16 hours in labor.	Died of acute gastric dilatation on 4th day.	Female	Died	Well
30	Mrs. J.M.	I	Aug. 23-21	First	Disproportion.	Clean, Unventful.	Female	Well	Well
31	Mrs. S.F.	I	Nov. 3-21	First	Breech R.S.P. Justo-minor Pelvis.	Clean, Unventful.	Male	Well	Well
32	Mrs. L.K.	I	Dec. 27-21	First	Disproportion.	Clean, Unventful.	Female	Well	Well
33	Mrs. L.M.	I	Jan. 8-22	First	Abruptio Placentae, Disproportion.	Died of hemorrhage and shock the same day.	Male	Died	Well

## KRÖNIC CERVICAL CESAREAN SECTIONS.

No.	Name	Para.	Date	No. of Sections	Indications	Convalescence.	Sex of Child	Condition on Discharge.
1	Mrs. B.O'K	I	Feb. 19-21	First	Disproportion. Previous Pelvic Operation. Adhesions.	Clean. Uneventful.	Male	Mother Well Baby Well
2	Mrs. M.B.	III	Mar. 17-21	Third	Two Previous Classical Cesarean Sections.	Pulmonary Embolism During Operation. Pneumonia.	Male	Well Well
3	Mrs. M.E.S.	II	June 22-21	Second	Previous Transperitoneal Cesarean Section. (Septic)	Clean. Uneventful.	Female	Well Well
4	Mrs. M.Q.	I	Aug. 23-21	First	Large Dermoid Cyst in Pelvis.	Clean. Uneventful.	Male	Well Well
5	Mrs. D.M.	I	Sept. 6-21	First	Floating Head at Term. Large Child.	Clean. Uneventful.	Male	Well Well
6	Mrs. N.W.	VII	Nov. 27-21	First	Extensive Plastics and Suspension. Large Child. Sharp Promontory.	Clean. Uneventful.	Male	Well Well
7	Mrs. M.C.G.	IV	Dec. 13-21	First	Central Placenta Previa. Previous Pelvic Operation. Adhesions.	Clean. Uneventful.	Male	Well Well

and left the hospital with healed incisions. Two babies were stillborn, and one lived twelve hours.

Case No. 1 of the transperitoneal series (septic, December 20, 1919) came to a second operation at term on June 22, 1921. Because of the adhesions to the cervix following the sepsis, the Krönic cervical section was performed, and her operation forms the third of the series of seven treated by this method. Case No. 13 is now seven months pregnant and has had no complications during the present pregnancy.

## CONCLUSIONS.

1. The transperitoneal cesarean section seems to afford protection against septic peritonitis.

2. There is less shock, as the intestines are not handled.
3. There is less bleeding.
4. The mother has a much easier puerperium.
5. There is better healing since the incision is in the cervix, the non-contractile part of the uterus.
6. There is less danger of rupture in subsequent pregnancies.
7. It does not contraindicate the test of labor.

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## GLIOMA OF LUMBAR CORD: CASE REPORT.

By DONALD S. ADAMS, M.D., WORCESTER, MASS.  
 [From the Surgical Service of Memorial Hospital.]

H. F., male, white, married, aged 50 years. Wife and one daughter living and well. Patient sent to hospital by family physician, with diagnosis of hypertrophied prostate. Chief Complaint—Pain in lower back and inability to pass urine. Nothing of interest in family history. Past history negative. Health always good. Had diseases of childhood. Denies venereal diseases. Present Illness—In April, 1921, while carrying out his duties as a railroad yardman, began having pain in lower back, more marked over region of right sacroiliac articulation, which was worse at night, especially when lying on right side. While working, no discomfort noted unless body was bent from the waist. In the patient's own words, "There is a tight feeling all through lower abdomen and back." Received various forms of

treatment without relief. In August, 1921, condition rapidly became worse. Pain of same character, but more marked, causing insomnia. Noted loss of weight, but exact amount not known. Began to have difficulty with urination, especially in morning, when several hours would elapse before bladder could be emptied. First week in September, was seen by orthopedist, who applied plaster jacket. This made matters worse; pain was not relieved, and could not find a comfortable position to rest. Unable to void. Had to be catheterized. Patient had given up work the last of July. Admitted to Memorial Hospital September 21, 1921. Service of Dr. Homer Gage.

Physical Examination: Poorly nourished man sitting in chair; somewhat dyspneic, due to plastic jacket. Head and Neck—Eyes react to light and accommodation very sluggishly. Only intense light invokes slight diminution in size of pupil. Extra ocular movements normal. Neck shows no enlargement of lymph-nodes or thyroid. Ears, nose and throat normal. Teeth

—Upper, false; all lower teeth gone except a few old roots. Thorax (after removal of jacket)—Symmetrical but somewhat emaciated. Heart normal in size and position. No irregularity; sounds normal. Lungs—Breath sounds normal; no râles. Abdomen—Scaphoid and flaccid. No scars, no masses, no palpable organs, no areas of tenderness. Percussion disclosed the presence of a distended urinary bladder. Genitalia—Penis and scrotal contents normal. Rectal examination discloses prostate small in size and not tender. Spine—No kyphosis, lordosis, or scoliosis. No areas of tenderness. Lower Extremities—Nothing remarkable, except for bilateral atrophy of calves and bilateral toe-drop. Reflexes—Knee-jerks, right, very sluggish; left, active. Babinski—Right, negative; left active. Clonus—Absent on both sides. Cremasteric—Present feebly on both sides. Kernig—Absent on both sides. Sensory Disturbances—None. Sphincters—Anal under control. Urethral—Spastic; unable to make patient void naturally by usual means. Treatment—Removal of jacket (resulting in great relief to patient), application of self-retaining catheter; urotropin by mouth; daily bladder irrigations.

September 24, 1921—Seen by Dr. Benjamin Burley, in consultation for Dr. Gage. Found evidence of lumbar nerve root and, possibly, spinal cord irritation. Advised lumbar puncture.

September 28, 1921—Spinal puncture done under local anesthesia and 5 cc. of amber-colored fluid withdrawn. Laboratory report stated fluid was largely serum, which clotted on standing; rich in globulin; no cells seen. Wassermann test negative. Blood Wassermann negative. Urine negative, except for occasional red and white blood cells. Blood examination shows 6,500 white cells and hemoglobin 80 per cent. X-ray of spine shows some deviation of lumbar spine to the right, with old bone destruction on left side of fifth lumbar vertebra; cause unknown. No evidence of tumor made out.

October 5, 1921—Patient feels more comfortable. Catheter out and patient voids normally. No change in physical signs. Lumbar puncture gave same type of fluid noted before; same laboratory findings. Patient ran a temperature varying between 100° F. and 101° F. over a period of three days. Has been normal for past week. Patient able to be up and about; walks well, although hindered slightly by toe-drop. Considering fact that he was feeling better and voided normally, was discharged to care of family physician, relieved.

On October 18, patient again returned. Chief complaint, on re-admission, was same type of pain, confined to back. No change in physical signs and still could void normally. Potassium

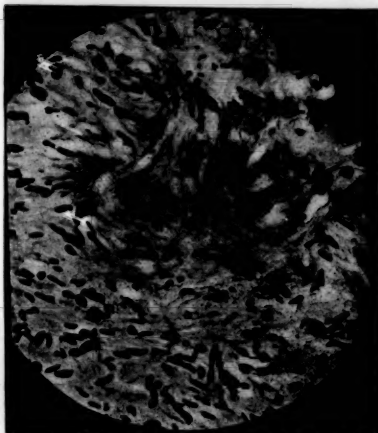


Appearance of gross specimen in cross-section at various levels, from normal dorsal cord to involved lumbar region.

iodide was ordered in large doses, and salicylates given for pain. The back was bled twice a day, with apparent relief. During the remainder of his second stay, the temperature and pulse charts were normal. Again discharged, relieved, November 9, 1921.

Third and final admission November 25, 1921. Temperature, pulse and respiration normal. The interval history, as recorded by the interne, covers the ground satisfactorily. For a few days after leaving the hospital, patient felt better, but pain began again after this, and gradually became worse, preventing patient from sleeping. Pain is constant and dull in nature, beginning in lumbar region, with occasional attacks of sharp pain shooting down both legs to knees—most marked on the left. Pain intense in lower lumbar region on movement at hip-joint. There has been no difficulty in voiding.

Physical examination disclosed no changes. Clinically, the pulse rate showed an increase—average rate 100 after a few days in hospital. Urine examination, normal; renal function, 40 per cent.; Blood Picture—W. B. C., 4,600; R. B. C., 4,208,000; smear showed no pathology; Hgb., 80 per cent.; Wassermann (blood) nega-



Microphotograph of glioma cells.

tive; spinal puncture again gave same findings, with negative Wassermann. On November 30, 1921, Dr. Burley again saw patient and made diagnosis of tumor of lumbar cord, at the same time advising laminectomy at level of first lumbar vertebra. Dr. Gage, considering the fact that patient was getting progressively worse, was not being benefited by conservative measures, and was willing to accept operation, decided to act upon Dr. Burley's suggestion.

Operation, December 14, 1921. Ether anesthesia. Operator, Dr. Homer Gage. Linear incision from lower dorsal to fourth lumbar vertebra. Erector spinae muscles separated from bony attachments and fascia divided in midline. Bleeding controlled and laminae removed over first, second and third lumbar region, exposing cord. The overlying dura was bluish in color, tense and protruding; it was incised in its long diameter, coverings laid open perfectly, and a gelatinous fluid escaped—a substance identical to that recovered on lumbar puncture. Caudal pathology at once presented itself in the form of multiple cysts, varying in size from a pea to a good-sized grape, involving the terminal nerve filaments. One small solid tumor also made its appearance. Several cysts and the solid tumor were removed and saved for examination. Further exploration was contraindicated, due to patient's condition. The wound was closed, leaving the dura open and a small rubber drain intact. Fair ether recovery.

The following notes will show the post-operative course:

December 15, 1921—Condition fair; temperature 98, pulse 120, respiration 20. Is taking

fluids well. Catheterized. Operation has not affected sensory or motor tracts.

December 17, 1921—Patient has failed rapidly in last 48 hours. Has been catheterized twice a day. Dressing changed, wound found to be in good condition. Drain removed. Permanent catheter applied. Patient is vomiting constantly and is not retaining Murphy drip. Pulse 150, and only fair quality. Stimulation hypodermically. Temperature 100.5.

December 18, 1921—Patient expired. Autopsy granted, to be confined to removal of spinal cord.

Report of Dr. Roger Kinnicutt: Cord—The lumbar enlargement is greater than normally found and at the lower portion is a friable, red tumor mass apparently infiltrating the cord. Histological report—Tumor consists of masses of oval cells, probably atypical neuroglia cells, in a rather slight connective tissue stroma. Scattered through the tumor are irregular hemorrhagic areas. Diagnosis—Probable glioma.

The above case is of interest because, although a fatality, it was complete. The neoplasm was irremovable. Involving the cord from the second lumbar segment down, it invaded the anterior horns, giving chiefly motor symptoms. The posterior horns being less involved, few sensory disturbances were elicited.

The fluid obtained at lumbar puncture gave an example of Froin's syndrome. The latter is the appearance of a straw-colored spinal fluid, rich in xanthochromatin and protein, coagulates quickly on standing, and presents a low cell count. It is frequently, but not invariably, associated with tumor, for any mechanical block of the spinal arachnoid will give rise to these findings.

I desire to thank Dr. Homer Gage for the privilege of reporting this case.

### Current Literature Department.

#### ABSTRACTORS.

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#### AUSTRIAN CANCER STATISTICS.

PELLER, in a continued article (*Wien. klin. Woch.*, Feb. 9-16-23, 1922), reports the statistical results of a systematic questionnaire investigation by the Austrian Society for the Study and Prevention of Cancer, particularly with reference to uterine carcinoma. [R. M. G.]



## TREATMENT OF CHOLERA.

CHATTERJEE (*Ind. Med. Gazette*, Jan., 1922) reports results in 97 cases of cholera treated by a modification of the method advocated by Sir Leonard Rogers in India. Of the 97 cases, 77 were cured and 20 died—a mortality of only 20.5 per cent. At the beginning sodium bicarbonate solution (two drachms to the pint) was used for intravenous injection. This was followed by Rogers' hypertonic solution. The first pint of pure alkaline solution prevents irritation of the lungs, which sometimes follows a saline injection; it removes acidosis to a certain extent more quickly than the Rogers hypotonic solution (soda bicarb. gr. 100, sod. chloride gr. 60 to the pint). Fractional doses of calomel check the vomiting quickly (gr.  $\frac{1}{4}$  doses every half hour). Potassium permanganate is avoided as it has been found to increase vomiting. When intravenous injection is interfered with by vasomotor disturbances, hypodermic injection of pituitrin 1 c.c. overcomes the difficulty. [L. D. C.]

## STRICTURE OF THE URETHRA IN WOMEN.

WILLIAM E. STEVENS (*California State Journal of Medicine*, Feb., 1922).—Stricture of the urethra in women is a condition which is very often overlooked, although it may be responsible for marked functional and organic disorders in the genito-urinary tract of this sex. Herman of London, following the examination of 53 women without urinary symptoms, concluded that the normal size of the female urethra is F 29, a little less than 10 millimeters. Van de Warcker expressed the opinion that a urethra from F 23 to F 28 should be considered normal. Examination of 114 patients at the Stanford Women's Clinic disclosed the fact that only 18, or about 16 per cent., had never suffered from symptoms referable to the urinary tract. Following urethral calibration in these 18 cases, the author found the average size of their urethra to be F 26, or a little less than 9 millimeters. As to symptoms, frequent urination is the most common. It occurs in over 85 per cent. of the author's clinic and private cases. Subjective symptomatology was not taken into consideration in the patients confined in the detention ward of the San Francisco Hospital, as many of these deny disability, hoping to be released as soon as possible. Next to this symptom, pain referred to the urethral or bladder regions is the most prominent symptom. This symptom occurs in 64 per cent. of the cases. Burning or smarting is present in 26 per cent., urgency in five per cent., and difficulty, constant desire to urinate, partial incontinence, dribbling and retention of urine were each present in two and a half per cent. of the patients. Residual urine is seldom found except in the presence of very tight strictures. The diagnosis is best made by means of the olive-tipped bougie. A urethratome or sound is much less reliable, as strictures usually yield to slight pressure, and consequently higher readings result from use of the latter instruments. The majority of urethral strictures should be treated by means of gradual dilatation, absorption of the constricting exudate being best promoted by this procedure.

Dr. Stevens' conclusions are as follows:

Stricture of the female urethra is relatively common, and consequently calibration of this organ should be part of the urological examination of every woman and child complaining of symptoms referable to the genito-urinary tract.

Strictures of the female urethra respond readily to proper treatment, and their early detection will prevent pathological lesions of the upper urinary tract secondary to this condition.

## FINAL REPORT ON FRACTURES OF THE SPINE IN RELATION TO CHANGES IN KIDNEY AND BLADDER FUNCTION.

PLAGGEMEYER, H. W. (*Journal of Urology*, Sept., 1921).—Two years ago 20 cases of shell fracture of the spine, with observations on certain constant relations between the spinal condition of hematomyelia or myelitis on the one hand, and functional or structural changes in kidney function, and in the motor phase of the bladder on the other hand.

Since then there are 15 more cases added, six in civilian life, the others at the hospital.

The results show that the curves showing reciprocity between nitrogen retention and phthalein output have maintained the same relation. There has been no evidence of return of integrity of the reflex arc necessary for the act of normal bladder control. There has been decided improvement in the motor phases, with no appreciable advance in sensory regeneration. In several cases partial sex function return is recorded, but in all cases there is a persistence of lack of sensation in the external genitalia and perineum.

There is every indication to believe that in all cases the bladder has retained the changes developing subsequent to the injury, and that each case constantly carries a small amount of residual urine. In spite of the residual, there have been no cases of stone formation from retention.

Bladder and bowel functions have shown a parallel curve as we should expect from their developmental analogy.

All the cases that died succumbed to infection. Three autopsies on characteristic types failed to show any dilatation of ureter or kidney pelvis, and it is not believed that back pressure in these traumatic types is confined to the bladder and does not pass beyond the ureteral orifices.

Catheterization is to be avoided, for it means sure infection, and it is to infection that these cases succumb. [B. D. W.]

## SPINAL CORD BLADDER OCCURRING IN PERNICIOUS ANEMIA.

KRETSCHMER, HERMAN L. (*Journal of Urology*, Sept., 1921). This paper concerns four cases of pernicious anemia which presented various urinary symptoms of sufficient gravity to justify careful and complete urological study.

Equally distributed as regards sex, all in the fifth decade of life.

The nervous symptoms—numbness in both hands and legs; numbness of toes; tingling sensation on bottom of feet; hands and feet usually cold; difficulty in handling small objects; unsteady gait, especially in dark.

Urinary symptoms—difficult urination, usually associated with obstructive lesions at neck of bladder; as progression takes place, bladder weakness and then incontinence with complete bladder paralysis in the terminal stages.

No case had incontinence of feces.

By cystoscopy the bladder is finely trabeculated. There is usually a superimposed infection, cystitis, later pyelitis.

Three of the four cases have died. [B. D. W.]

## THE SAGGING KIDNEY AS A FACTOR IN THE PERSISTENCE OF COLON BACILLUS PYELITIS.

CHARTREE, E. GRANVILLE, AND SHEDDEN, WILLIAM M. (*Journal of Urology*, Sept., 1921), say: This type of kidney infection is believed to be a medical condition requiring urinary antiseptics and symptomatic treatment, by a great many medical practitioners.

such as would be given any acute infection. The patient should be warned that it may develop into a chronic pyelitis, and may persist as a permanent disability.

Usually this condition is accompanied by sagging of the organ and thus a kink is in the ureter. Frequently the infection is unilateral; more often on the right and more often in pototic individuals.

Many instances are bilateral.

Other causes of stasis, other than sagging, are stone, hydronephrosis, abnormal renal development, and strictured ureters. With these possibilities in view, it is necessary that careful study be done so that cause may be remedied at its inception, to prevent the progressing of these cases to the stage where we have a destroyed kidney.

It is believed that infections all along the urinary tract, with the exception of tuberculous infections, get well, unless there is something that prevents drainage and causes the urine to puddle.

Pelvic lavage in these sagging cases diminishes the acute infection and the process then quiets down to a great extent, when it has been established that the kidney has normal drainage.

By such study of cases of pyelitis the definite types of treatment will be established. [B. D. W.]

#### THE REMOVAL OF URETERAL STONE BY CYSTOSCOPIC MANIPULATION.

CROWELL, A. J. (*Journal of Urology*, Sept., 1921), says: In the past six years ninety-five cases of ureteral stone have been subjected to cystoscopic manipulation, and the stone was removed in 88 cases. In four the stone was pushed back into the kidney pelvis; one obtained relief from dilatation and failed to return for further treatment; and two ureterolithotomies were performed.

The method consists in ureteral anaesthesia and ureteral dilatation. Two and three No. 11 urethral catheters may be coaxed up a ureter; with such dilatation the stone is usually dislodged and comes down. Mortality is much lessened.

The method is not practical in children where the urethra is too small to admit a catheterizing cystoscope, or in men with enlarged prostates, or bladder tumors, or stones making ureteral catheterization impractical. [B. D. W.]

#### RELATION OF UROLOGY TO GROUP MEDICINE.

BRAASCH, WM. F. (*Journal of Urology*, October, 1921), says: Clinical data, other than those frankly suggestive of involvement of the urinary tract which indicate consultation by urologists, are: 1. History of previous haematuria or pyuria, even though urine analysis is negative for the time being. 2. Pus or blood cells in the urine, even though no other symptoms or physical data are suggestive of involvement of the urinary tract. 3. Any tumor in the upper lateral abdomen or suprapubic area. 4. A roentgenographic shadow suggestive of location in the urinary tract. 5. A history of abdominal pain without definite evidence of disease in the intra-abdominal organs.

Urologists usually have patients referred to them for examination because of pronounced urinary symptoms, such as frequency, difficulty, or haematuria. As a result, many patients with lesion in the urinary tract without such symptoms do not have the benefit of skilled urological investigation, and the condition is either first recognized in the advanced stages, or on surgical exploration, or it is not recognized at all.

The most closely related of the specialties to urology is roentgenology, and it is difficult to imagine how either specialty could attain any degree of accuracy without mutual cooperation. The data offered the internist and the surgeon by the urologist in the

differential diagnosis of abdominal lesions are often of the greatest value; as radiation of pain to the renal or suprapubic area, abdominal tumors, particularly in the upper lateral quadrant.

In cases of persistent fever, the possibility of an occluded renal lesion, a dormant pyelonephritis, a concealed infection of the seminal vesicles, a cicatricial renal tuberculosis, must all be considered as possible sources. Occasionally early lesion of the central nervous system can be recognized through cystoscopic data. On the other hand, patients with urinary difficulty or residual urine, who have no clinical evidence of urinary obstruction on physical or cystoscopic examination, should be referred to the neurologist for the exclusion of lesions of the central nervous system. This cooperation of neurology and urology must be emphasized.

The orthopedist many times wishes renal tuberculosis ruled out or the differentiation of a psoas abscess and a sinus leading from a pyonephrosis. The pediatrician realized the importance of even a few pus cells in the urine of children with obscure symptoms or fever. The importance of foci of infection in the mouth, nose, and throat, and their bearing on infection of the urinary tract, has been emphasized. There is close relationship of diseases of the pelvic organs in the female to the urinary tract.

Dr. Braasch feels that the most important advantage offered by group medicine is in the increased facilities for graduate instruction in the various specialties. The patient also can expect (1) a more complete diagnosis, (2) economy in time and expense, and (3) better results. Also he feels that there are many reasons in favor of the urologist taking care of his own surgery. [B. D. W.]

#### PAPILLOMA OF THE URETER.

CULVER, HARRY (*Journal of Urology*, October, 1921), says: Ureteral papilloma have a tendency to be located in one of three manners; the entire ureter involved with the pelvis and bladder, also pelvis and first few centimeters of the ureter involved, or lower part of pelvis and upper part of ureter and lower centimeters of ureter with intervening parts being normal. The case presented in detail with illustrations belongs in the second mentioned group, but has no renal pelvic involvement.

The author collected from the literature 16 cases besides his own. Fourteen were reported clinically, and three were discovered at autopsy. The clinical cases presented essentially three symptoms: tumor, haematuria and pain. Nine cases showed definite tumor mass, and in two this was first sign and only complaint. This tumor in all incidents is that produced by hydronephrosis or hematomphrosis, and not due to neoplasm itself. Seven had haematuria, and in two this was the only complaint. This may or may not be accompanied by ureteral colic. Six cases had pain and in one was the only complaint. All these tumors are benign, but potentially malignant, so it is obviously indicated to do as complete a removal as possible. If location is near bladder, ureteral resection and transplantation can be done. For all tumors further removed from the bladder complete nephrectomy or ureterectomy is indicated, unless there are serious complications. [B. D. W.]

#### THE USE OF THE D'ARSONVAL METHOD OF COAGULATION NECROSIS FOR THE REMOVAL OF IMMENSE INTRAVESICAL OUTGROWTHS OF THE PROSTATE, SIMPLE OR MALIGNANT.

MACGOWAN, GRANVILLE (*Journal of Urology*, Oct., 1921), says: During the past ten years much has been accomplished. In curative effect, by the high frequency current in the treatment of tumors of the

bladder. The writer and others then made use of both the Oudin and the D'Arsonval currents in the treatment of large papilloma and cancerous growths of the bladder, with such success, that they felt it desirable, as a method of removal of giant tumors, which spring from the bladder wall or directly at the prostate; whether cancerous growths distinctly pediculated, but filling up large portions of the bladder; or tumors, simple adenoma, springing from either or both sides of the prostate; supplied with blood-vessels of large size, promising enormous loss of blood in any attempt to enucleate, so that the stanching of the hemorrhage and its control under any kind of tamponage would be problematic.

The Oudin current is monopolar, and is not available for this purpose because it is not hemostatic, excepting when the heat of the current becomes sufficient to char the tissues; whereas the bipolar, or D'Arsonval current, is distinctively disorganizing, causing coagulation necrosis and desiccation of the tissue. In this process, the fluids of the tissue are cooked, the endothelium of the blood-vessel destroyed by the heat of the process of boiling and subsequently dried up. This destruction does not extend very far from the end of the metallic electrode; its action is not rapid.

The author then reports five cases in detail with illustrations. He feels that a successful treatment of only one of these cases could, in all probability, have been accomplished in any other manner.

[B. D. W.]

#### FOCAL INFECTIONS IN RELATION TO SUBMUCOUS ULCER OF THE BLADDER AND TO CYSTITIS.

MEISSER, JOHN G., and BUMPUS, HERMON C., Jr. (*Journal of Urology*, Oct., 1921), say: The changes in the tissue in submucous ulcers indicate a blood-borne infection. The urine is usually sterile, which is a further indication that the etiology of the condition must be sought outside the urinary tract.

Hunner has suggested the source of such infection is oral sepsis, which often is the cause of other diseases. At the Mayo clinic 15 patients with submucous ulcers have been operated upon. Seven of these had had tonsillitis, three had had tonsillectomies, five had had grip, three had had scarlet fever, and one had had rheumatism. On careful dental examination 11 cases showed evidence of periapical infection.

In the series of the six patients whose cases are herein reported five gave histories of previous tonsillitis; in three it had been sufficiently severe to require tonsillectomy; in one case an infected tonsillar remnant furnished the culture for our experimental work. Five of the six patients had dental sepsis. Four patients had had symptoms pathognomonic of submucous ulcer of the bladder; the presence of the ulcer was confirmed by cystoscopic examination. The urine analysis in each case was negative, except for a few erythrocytes and an occasional leucocyte. One of the remaining two patients had diffuse cystitis of unknown origin, the other a simple ulcer of the bladder. In both the urines from the bladder were highly infected.

The authors conclude that finding these streptococci in the excised ulcer and their experimental work demonstrate that submucous ulcers of the bladder and other infections of the urinary bladder may be due to focal infections harboring streptococci which have a selective affinity for the urinary tract.

[B. D. W.]

#### THE USE OF GUM-GLUCOSE SOLUTION IN MAJOR UROLOGICAL SURGERY.

LOWSLEY, O. S., MORRISSEY, J. H., and RICCI, J. V. (*Journal of Urology*, Nov., 1921), say: The most

important and dangerous signs of shock or a shock-like condition are the profound fall in blood pressure, the concomitant weak and thready pulse, the rapid, shallow respiration, the subnormal temperature.

Physiologists have demonstrated that trauma, continued trauma, is the essential and direct cause of shock; particularly in the presence of prolonged anaesthesia, prolonged surgical procedures, and excessive loss of blood. It is believed is formed, subsequent to a derangement in the metabolism, which acts locally on the peripheral capillaries, increasing their lumen by dilatation of the walls, and adding to their permeability.

A falling blood pressure signified a failing circulation, and this in turn precludes an anemia of the bulbar centers, the respiration, the vaso-constrictors, and the vaso-dilators. So if a substance can be used in transfusion and maintain the blood pressure, there will be no anemia of blood centers. Also acidosis, which may be brought about by muscular metabolism, or crushing of tissues, is roughly an increased carbon dioxide volume and a diminished bicarbonate content of plasma. Thus with a better maintained circulation renal and pulmonary vascularity is at its best level, thereby favoring the elimination of acids and gases.

Gum-glucose solution increases the volume of the circulating blood, and maintains it at this higher level, and thus raises the blood pressure, combats a tendency to acidosis, furnishes a certain amount of stimulation, and furnishes a certain amount of food.

The injection of the fluid tends to increase the blood volume and to raise the blood pressure. The presence of the gum tends to prevent the loss of this fluid from the vessel, and thus acts to maintain the advantage gained by infusion. The glucose acts both to prevent or to combat the acidosis that may be present, and is a stimulant.

[B. D. W.]

#### A CASE OF UNUSUAL SOLITARY TUBERCULOSIS OF THE KIDNEY.

SMITH (*Journal of Urology*, Nov., 1921) says that tuberculosis of the kidney presents itself in two common forms. One is miliary tuberculosis of a general hematogenous infection; the second and common type is that of tuberculous pyonephrosis. The third and uncommon type is that of the isolated, solitary, tuberculous granuloma.

The author cites a case in detail of a young adult with a clear-cut clinical case of unilateral renal tuberculosis. There was for one week, preoperative, a persistent elevation of temperature which was not explainable by pulmonary tuberculosis or by any of the common causative agents. Following an extremely easy removal of a diseased kidney the patient developed an intense streptococcus septicemia with later peritonitis which resulted in death. Pathological examination of the kidney and post-mortem showed, first, a rare condition of a large, solitary tuberculoma of the kidney, from which repeated sections were necessary to establish its specificity; second, the absolute non-existence of any other focus of tuberculosis.

[B. D. W.]

#### DUODENECTOMY.

MANN, F. C., and KAWAMURA, K. (*Annals of Surgery*, Feb., 1922).—These authors write as follows:

This brief review of our experiments readily shows that the duodenum is not necessary for life, and the fact that noteworthy changes were not observed makes it appear that its function does not differ greatly from that of the rest of the intestinal tract.

Only one positive finding was obtained in the entire series of experiments. In two of the dogs a large ulcer was found on the jejunal side of the suture line of the gastrojejunal anastomosis. In one of the animals the ulcer perforated, causing peritonitis and death 515 days after duodenectomy. The other animal came to necropsy 383 days after duodenectomy and a large ulcer with a hard base was found.

Eleven duodenectomized dogs were kept under observation for from ten to thirty months. One of these is still alive. Of the ten coming to necropsy, two had ulcers. Since peptic ulcer of the subacute or chronic type is very rare in the dog, this seems significant.

At the suggestion of Dr. C. H. Mayo we are making a more comprehensive study of the effect of duodenectomy in relation to gastric secretion, and are also studying the possible function of Brunner's glands. From these studies we hope to determine the reason for the presence of these ulcers.

The investigation was undertaken for the purpose of determining the effect of removing the duodenum. A one-stage operation for removal of the duodenum was developed. The duodenum was removed from the dog, cat, hog, goat and monkey, although long-continued observations were made only on the dog, cat and hog. Careful studies on these three species did not reveal any noticeable changes following the duodenectomy. In the dog observations were carried on more than two and one-half years after operation. The animals remained in good condition. No data have been secured to show that the duodenum is of great importance in any of the species studied. However, in two of the ten dogs studied a typical peptic ulcer occurred on the jejunal side of the gastrojejunal anastomosis. Whether this bears any relation to the loss of the duodenum or any specific part of it, as Brunner's glands, is to be determined. [E. H. R.]

#### FISTULAE JEJUNO-COLICAE PEPTICAE.

HELLSTRÖM, N. (*Acta Chirurgica Scandinavica*, vol. LIV, fasc. III, p. 282) summarizes the literature of this condition, and reports a case of his own. Forty-two cases in all have been described. The symptoms of perforation between jejunum and colon have appeared as early as four months and as late as twelve years after gastroenterostomy. No case has been reported following a gastroenterostomy with the loop in front of the colon. The symptoms are diarrhoea, fecal vomiting and eructations, emaciation and general debility, and pain. Diarrhoea is the earliest symptom and one which was present in every case except one.

The operative treatment of this condition depends upon the condition of the patient and the findings at the time of laparotomy. If possible, simple separation of the adherent intestines, with closure of the fistulae, should be done. It may be necessary to short-circuit the colon, or to resect the jejunum. Hellström advises against resection of the colon. In some cases, as in his own, it may be necessary to resect both colon and jejunum, owing to the infiltration of their walls and the extensive adhesions about them. [G. G. S.]

WHAT CAN MORE THAN 6000 POST-MORTEM EXAMINATIONS TEACH US ABOUT EMBOLI AND EMBOLIC GANGRENE OF THE EXTREMITIES?

BULL, P. (*Acta Chirurgica Scandinavica*, vol. LIV, fasc. IV, p. 315) in 6140 autopsies found emboli in the extremities 15 times. In 13 of these cases, thrombi were found in one or more of the cardiac

cavities; in the remaining two cases the primary thrombus was presumably in the aorta. Thrombi were found in the cardiac cavities in 181 cases; they occurred in the right side in 67 cases, in the left side in 63 cases, in both sides in 51 cases. In the 15 cases of embolism of the extremities, emboli occurred in one or more organs in 14 cases. It is important to remember that embolus of an extremity is most often nothing less than a link in a chain of emboli in other arteries. [G. G. S.]

#### EMBOLECTOMY AS A METHOD OF TREATING EMBOLIC DISTURBANCES OF THE CIRCULATION IN THE EXTREMITIES.

KEY, EINAR (*Acta Chirurgica Scandinavica*, vol. LIV, fasc. IV, p. 339) publishes a lengthy article upon this subject. He embodies his views in his conclusions, from which the following points may be abstracted:

An embolus lodged in a peripheral artery will rapidly cause changes in the intima and a thrombus formation further along the vessel. Therefore, within an hour after the embolus has lodged an attempt should be made to remove it by arteriotomy. Local anesthesia should be employed. There are a number of points in the technic which should be observed, such as keeping hands and instruments wet with sodium citrate solution. After removal of the embolus the proximal compression should be released in order to wash out any particles of clot. If contraindications to operation exist, such as poor general condition of the patient, bad heart action or advanced arteriosclerosis, one should try as soon as possible to dislodge the embolus by massage. [G. G. S.]

#### TREATMENT OF SNAKE-BITE.

HAGRA (*Ind. Med. Gazette*, Nov., 1921) reports 35 cases of snake-bite treated with various drugs. He finds that antivenene is the specific remedy against the venoms of the cobra, krait and some of the viperines. It is capable of neutralizing venoms when present in the blood stream. Its efficacy depends on the freshness of its preparation and the shortness of the interval between the bite and the administration of the drug. Intravenous administration is best and can save life even when toxic symptoms have developed.

Potassium permanganate can neutralize the venom locally. Given subcutaneously, it causes pain and swelling, but is effective.

Iodine given intravenously is effective against viperine toxæmia when thrombosis is developing. Injection relieves pain and localized swelling, and brings about speedy recovery.

All remedies are useless after complete fixation of the venom in the brain and nerve cells. [L. D. C.]

#### HEALTH EXAMINATION OF WORKING CHILDREN.

THE Department of Labor and Industries is publishing a form for use in the examination of children applying for employment certificates. This form covers the main points given in the one recommended by the Children's Bureau, but is much less detailed. The Department recommends that school physicians



assigned to examining children for health certificates use this schedule. Copies will be furnished on application.

At the present time there is no standard form for this purpose in use in the state. A few physicians have their own records; but in the majority of instances no form is used, so no permanent record is kept. It is important that the results of the examination should be recorded and kept on file in the office from which the employment certificate is issued. By this means it is possible, when the child returns for another certificate, to check the examination with the result of the previous one, to ascertain whether defects noted at the former time have been corrected, and to secure some information as to the effect of the work on the child's health.

A standard form for all issuing offices is desirable, in order that there may be greater uniformity in practice throughout the state and in order to insure that the examination made covers all the essential requirements. It is hoped that the use of the proposed schedule will assist in bringing about these results and will secure a more thorough and careful examination of children applying for employment certificates than is the case at the present time.

The Department is also preparing a handbook explaining the procedure in issuing employment and health certificates and badges for street trades. This will contain a section on the health certification of working children, with reproduction of the new forms.

A copy of the blank is herewith submitted:

MASSACHUSETTS DEPARTMENT OF  
LABOR AND INDUSTRIES.

Record of Physical Examination of Child  
Applying for Employment Certificate

Name	Address	School	Grade
Intended Employer	Address	Industry	Occupation
1. Sex, M. F.	2. Color, W. C. O.	3. Birthplace of Child	
4. Of Mother	5. Of Father	6. Date of Birth	
7. Age Yrs.	8. Height Ft. In.	9. Weight Lbs.	
Significant Medical History: Physical Examination:			
10. General Physical Condition			
A. Excellent B. Good C. Fair D. Poor			
11: Maturity Apparently Attained Yes No			
Skin and Mucous Membranes			
12. Color 13. Parasitic Dis. 14. Other Dis.			
Eyes			
15. Vision R. L. 30. (SP)			
16. Disease R. L. Summary of Defects			
Ears			
17. Hearing R. L. 30. A. Correctable			
18. Disease R. L. 32. B. Non-Correctable			
Mouth 33. Treatment recommended:			
19. Dental Defects			
A. Caries Certificate			
20. Other Defects Recommended			
Nasopharynx 34. A. Unconditional			
21. Nasal Obstruction 35. B. Provisional (SP)			
Tonsils Refused			
22. Normal 36. A. Permanent (SP)			
23. Abnormal (SP) 37. B. Temporary (SP)			

Chest	Remarks:
24. Heart	
Normal	
Abnormal (SP)	I am—am not—acquainted
25. Lungs	with the process on which
Normal	this child is to be engaged.
Abnormal (SP)	(Cross out statement
Abdomen	which does not apply)
26. Hernia	
Nervous System	
27. A. Chorea	
28. B. Tic	
29. C. Speech Defect	
I certify that I have examined this child and that	
the findings are as above stated.	
Signed by Examining Physician.	

Instructions to physicians for filling in records of Physical Examination of Children Applying for Employment Certificates.

In filling out record blank, use check (x) where defect or abnormality is found, and dash (—) where condition is normal. Where item is marked (SP) specify defect or condition indicated.

Grade—Enter grade completed.  
Industry—Specify, as "cotton mill," not "textile."  
Occupation—Specify, as "doffer," not "mill hand."  
Color—White, colored, other.  
Birthplace of Child—Country of Birth.  
Birthplace of Mother and Father—Country of birth.

Height—To be entered to nearest quarter inch. The child should be measured without shoes.

Weight—To be entered to nearest quarter pound. The child should be weighed without shoes and outer clothing.

Significant Medical History—Brief notation of previous illnesses.

General Physical Condition—To be determined by such factors as muscle tone, the color of the skin and mucous membranes, and the relation to each other of height, weight and age. Check on record card condition indicated as follows: Excellent—Good—Fair (Requiring supervision)—Poor (Requiring medical attention).

Maturity Apparently Attained—Examiner's impression.

Skin—Parasitic diseases. Here note pediculosis, scabies, etc.

Eyes—A separate examination and record of the visual acuity of each eye should be made, the Snellen or similar test card\* being used. Ability to read the twenty-foot line at a distance of twenty feet to be considered perfect and recorded as 20/20. Record in fractions, the numerator indicating the distance between chart and child, denominator indicating line read by the child. (Figure shown at side of chart.) If child is unable to read any of the letters correctly at twenty feet, move him toward the chart until he can see the top letters, and measure distance between him and the chart and record as test. If child is wearing glasses, the test to be made both with glasses on and with glasses off. A child with vision of 20/30 or less in either eye should be referred to an oculist.

Ears—Each ear to be tested separately, using the whispered voice at a distance of twenty feet. Child should stand with ear being tested toward examiner, and other ear covered or external canal occluded. If hearing is defective, the examiner should advance slowly toward the child until he can hear the whispered voice—Measure distance between examiner and child, and record in fractions, 20/20 being normal. Inability to hear the whispered voice at ten feet or less should be considered defective hearing and should be referred to a specialist.

Tonsils—Enlarged—diseased. Visual examination

\*The Department of Education will furnish a new visual test card for use in the public schools in this State.



of the throat to be made with the use of tongue depressor.

**Chest**—Examination of the chest should always be made on the bare skin.

**Lungs**—To be examined by percussion and auscultation, using the stethoscope. Any abnormal condition to be specified.

**Heart**—To be examined with stethoscope. Heart disease—specify variety of organic disease and compensation.

**Abdomen**—Presence or absence of hernia to be determined by questioning and physical examination where suspected. State whether found or not, whether truss worn, and whether or not child needs operation.

**Orthopedic Defects**—General inspection of the body to be made. All defects, including impaired mobility or defects of posture must be specified. Necessary measurements to be made when indicated by abnormal findings.

**Treatment Recommended**—Note treatment recommended for correction of defects, and to what agency, if any, child is referred for treatment. For example, reference to dentist in case of defective teeth.

**Certificate**—Check as indicated and specify physical defect causing recommendation of refusal or of provisional certificate issue.

**Remarks**—Examiner to cross out "am" or "am not," indicating ignorance or knowledge of the precise nature of the work for which the applicant is to be employed.

#### BOSTON MEDICAL HISTORY CLUB, MAY 12, 1922.

At the last meeting of the Boston Medical History Club, Dr. Walter R. Steiner of Hartford, Conn., read a paper on "Dr. Elisha Perkins and His Metallic Tractors."

Dr. Elisha Perkins was born in Norwich, Conn., on January 16, 1741. His medical education came largely from his father, Dr. Joseph Perkins, a well-known and respected physician of that vicinity. He settled in Plainfield for the practice of his profession and became prominent and popular, giving largely to the support of the academy and taking many of the students into his own house to live. It is said that his family at times numbered 50. During the Revolution he was surgeon to the Eighth Infantry. In his practice he had noted the influence of metallic substances on nerves and muscles, and had observed the contraction of muscles under the knife. This led to his discovery, in 1796, of his famous metallic tractors. These consisted of two rods of metal, about three inches long, shaped like horseshoe nails, with the legend "Perkins Patent Tractors" stamped on them. One of these was made of copper, zinc and a little gold; the other consisted of iron, silver and supposedly platinum. The pair cost about a shilling to manufacture and sold for two guineas. "To Perkinize" was to draw the instruments alternately across the

painful part, or from the painful part to the extremity. It was, however, stated that this "does not always relieve headache due to the excessive use of strong drink."

The discovery was reported at a meeting of the Connecticut Medical Society, but was apparently received with some doubt. However, Dr. Perkins went with his tractors to Philadelphia and took that city by storm. Congress was sitting at the time and prominent legislators became his patients. Washington was reported to have purchased a set, and so popular did they become that people sold horses and carriages to buy them. One speculative individual sold his plantation and took the pay in tractors. In February, 1796, a patent was taken out. The Connecticut Medical Society, refusing to honor its own prophet, condemned the practice at this time, and the following year expelled the discoverer from the body. In 1799 he died in New York of typhoid, a disease he had gone there to cure with his tractors.

Benjamin, a son of the inventor, and a graduate of Yale, went to London in 1795 and opened an office to introduce the tractors. In applying for a patent in England he explained that it was "generally believed that they act on the galvanic principle." This, however, was but one of several explanations of their action. Among many cited in his book as users of the tractors were nine members of the clerical profession, six of them doctors of divinity. One person, less favorably impressed, wrote: "If they have ever relieved pain I have found them useful also in picking walnuts." Several books appeared extolling the virtues of the tractors; one was published in Copenhagen (Denmark had fallen before the tractors) and translated into German and English. Fifty cases formed the basis of this Danish report.

The tractors, it was stated, must be applied three times daily for one-half an hour. They were not effective in venereal or serofulous diseases. As proof that imagination had no part in the cures attributed to the tractors it was pointed out that they were equally effective on infants, in epileptic fits, and on dumb animals, where no imagination could exist. Mr. John Grant of Leighton Buzzard, Bedfordshire, found the metallic tractors "equally useful on the brute animal as on the human subject, and I think they are more active on the horse than on those which chew the cud, as sheep, cows, etc."

The first Perkinian Institution was opened in 1804 in Frith Street, Soho Square, London. Many others followed. One poem of lasting fame resulted from the tractors. Supposed to be a satire on Perkinism, it was probably written at the instigation of Benjamin Perkins by a Vermont inventor in London and is in reality a bitter satire against the Royal College of Physicians.

"The Modern Philosopher, or Terrible Tractorations! A Poetical Petition Against Galvanising Trumpery and the Perkinistic Institution in Four Cantos. Most Respectfully Addressed to The Royal College of Physicians by Christopher Caustic, M.D., LL.D., A.S.S., Fellow of the Royal College of Physicians, Aberdeen, and Honorary Member of no less than nineteen very learned Societies."

Benjamin Perkins left England in 1803 with ten thousand pounds derived from the sale of tractors, and established in New York in the bookselling business. He died soon after at the age of 37. By 1811 the tractors were almost forgotten.

At the conclusion of Dr. Steiner's paper Dr. Streeter spoke informally on the plan to install an ancient apothecary shop in the Boston Museum of Fine Arts, the trustees having voted last month to give space for this purpose. Reconstruction in museums of ancient crafts and shops is quite common in Europe, but so far has not been done in this country. Thus in the Germanic Museum in Nuremberg are three rooms, one representing a 17th century German and one a 17th century Italian apothecary shop. These are also found in Zurich, Munich and other cities. Dr. Streeter showed photographs of the shops in the Nuremberg Museum, and also exhibited an ancient jar and a bronze mortar and pestle. A possibility for furnishing this space is to buy complete a shop of the 16th or 17th century with the original fittings and shelves, such as still exist in the villages of the Appenines. Dr. Streeter now has enough mortars, some bottles, and about 25 jars, but two or three hundred are needed; these need not all be of the same period.

#### STAFF CLINICAL MEETING, BOSTON CITY HOSPITAL, MAY 11, 1922.

The first paper was by Dr. Oscar M. Schloss, professor of pediatrics at the Harvard Medical School, on "The Causes and Treatment of Vomiting in Infants." Dr. Schloss outlined the causes as follows:

- I. Direct gastric irritation.
  - (a) Excessive fat or sugar.
  - (b) Excessive quantity of food.
- II. Delayed gastric emptying.
  - (a) Obstruction.
    - Pyloric stenosis.
    - spasm.
    - Duodenal.
  - (b) Atony of stomach.
    1. Due to excessive feedings.
    2. Toxic.
      - Acute nutritional disturbances.
      - Acute infections.

Vomiting is one of the most common symptoms of infancy, due to many causes and accompanying many conditions. The cause is probably always central, being reflex from the stomach, heart, etc.

Vomiting due to direct gastric irritation is a common type, although not as common as formerly, before the feeding of infants became an exact science. This type is generally due to excessive fat or sugar in the formula, and is controlled by reducing the offending principle, or the total quantity of food if the fault lies with an excessive amount.

Delayed gastric emptying is a cause of vomiting, primarily through obstruction. The chief factor in this condition is pyloric stenosis, and a discussion of this always involves pyloric spasm; the two must be considered together. The cause is unknown, although it is known that it consists in hypertrophy and contraction of the circular muscle of the pylorus. This is commonly considered to be congenital, although the cases that have actually been proven so are rare. Vomiting generally begins two to three weeks after birth, so if congenital a secondary element must come into play. This is usually spasm. Two cases on record with a typical history of pyloric stenosis showed, on operation, normal pyloruses which contracted on manipulation, with production of a tumor. Some believe the tumor is a gradual development due to the spasm. Many cases with symptoms of obstruction without tumor clear up on medical treatment.

The treatment of both conditions depends on the diagnosis. If it is certain that there is a definite tumor with hypertrophic stenosis, operation is indicated. If there is doubt whether spasm or tumor is causing the obstruction, medical treatment should be instituted until the diagnosis is certain or the condition is relieved. Opinions on treatment are divided into three groups:

1. Operate as soon as the diagnosis of stenosis is made.
2. Cases should be considered as primarily medical, and surgery resorted to only after a thorough trial of medical treatment over a considerable period of time.
3. All cases should be treated medically at first, but operated upon if improvement does not come quickly—within ten days or two weeks.

Dr. Schloss believes that many cases of hypertrophic stenosis can be cured medically, but only with long hospital treatment. Generally the safest and most economical method of treatment is to operate after a week or ten days of unsuccessful medical treatment.

Medical treatment for both stenosis and spasm is very variable. This may consist of small, frequent feedings of breast milk, starting with one gram at three-hour intervals, and

increasing daily. Stomach washes two or three times daily and atropine in sufficient doses—1/1000 of a grain in each feeding, increasing 1/1000 at a time until 5-6/1000 is reached—are other methods employed. A fourth method consists of thick cereal feedings, either rolled into a ball and placed on the back of the tongue or forced through a Hygeia nipple. Sometimes transfusion must be resorted to early in the treatment to tide over a patient in bad condition. With such a regime of starvation dehydration must be anticipated and rectal fluid given if necessary.

Atony of the stomach entails delayed gastric emptying with a greatly dilated, thin-walled stomach. A common cause is the feeding of large amounts through fear of irritation from too concentrated feedings. Thirty-two ounces of fluid a day is sufficient for most infants until they get whole milk. In treating this condition the feedings are thickened with starch until they will just go through the ordinary nipple.

Acute nutritional disturbances with diarrhoea are the result of too much feeding. The infant at first refuses food and then starts vomiting. Retention is found with the stomach tube. For treatment reduce the total amount of food to the minimum. This also obtains for types due to acute infections where retention results from decreased motility of the stomach.

In cyclic vomiting the acetone bodies are increased, but this is an effect, not a cause, of vomiting. This must be treated with large amounts of carbohydrate, orally, rectally, or intravenously.

The second paper of the evening was given by Dr. Edwin H. Place, on "Rashes: Their Significance, Differential Diagnosis, Treatment."

Toxic eruptions are of many types. They may be due to vasomotor disturbances or to systemic disturbances resulting from disease, drugs, foreign proteins, or local applications or conditions.

In diagnosis we must think of the eruption as part of the disease, often essential for diagnosis, but the diagnosis is rarely made on the eruption alone.

In scarlet fever we encounter a fine, punctiform rash, with papules rarely more than two mm. in diameter, symmetrical in its distribution, electing first the flexor surfaces of the body where the skin is thinner. The rash may be distributed all over the body except the face, or limited to the axillae and groins. Next in order of frequency come the sides of the thorax, then the flexor surfaces, then the general distribution. The eruption may be coarse on the extremities, but is never coarse and blotchy on the trunk. In its course it progresses from the upper trunk downwards, subject to considerable variation.

Measles presents a generalized eruption starting on the face and progressing downwards. The coarse, blotchy eruption of measles is never like the fine, scarlatiniform rash. The macules of a measles rash are irregular, taking all sorts of forms, of which none are typical.

Rubella runs the same course as measles but much more rapidly. Where a measles rash is three or four days in its progression, rubella completes its course on the third day and is generally entirely gone on the fourth. The macules are 3-4 mm. in diameter, intermediate in size and type between scarlet fever and measles.

The eruption of chicken-pox is more distinct and goes through more changes in the skin. It is never grouped or limited but peppers the entire body irregularly. The evolution is rapid, with the production of vesicles in 24 hours and pustules in three days. The lesions occur in crops, unlike smallpox, where they come at the same time and go through the stages of evolution together. The lesions of smallpox occur characteristically on the face and select the extremities rather than the trunk. They may come out in enormous numbers on a congested part of the body.

The type of lesion is of little value in diagnosis. The multi and unilocal variations and umbilication are not clinically valuable. The palmar, plantar, and oral distribution, considered characteristic of smallpox, may also apply to chicken-pox.

Diagnosis of exanthemata is made not so much from the eruption as from the other manifestations of the disease. Drugs must not be considered as the cause of an eruption until all other causes have been eliminated. Salicylates are not followed by a scarlatiniform rash nearly so often as scarlet fever is. Toxic eruptions in the exanthemata may cause confusion in differential diagnosis; septic rashes may occur in septicemia, but other causes for the eruption must first be excluded.

The mucous membrane lesions of rubella are often mistaken for Koplik's spots, but are smooth and shiny, not horny or ulcerative as are true Koplik's spots. Enlargement of the post-auricular lymph nodes is common in rubella, but far from specific for this disease.

Eruptions as such require no treatment except symptomatically, as for itching. Chicken and small pox require skin asepsis to prevent secondary infection. Tub, spray, soap, and rinse are important, even from the onset. Then dry and apply an antiseptic wash or lotion. Fifteen or twenty per cent. chlorinated soda is excellent for this. Iodine may be used locally. The formation of crusts means that asepsis has not been carried out. Scarring cannot be prevented, although it may be accentuated by scratching or by secondary infection.

## THE BOSTON Medical and Surgical Journal

Established in 1828

Published by The Massachusetts Medical Society under the jurisdiction of the following-named committee:

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SUBSCRIPTION TERMS: \$6.00 per year in advance, postage paid for the United States, \$7.50 per year for all foreign countries belonging to the Postal Union.

Material for early publication should be received not later than noon on Saturday. Orders for reprints must be sent to the printer with galley proof of paper. Upon written request, authors will be furnished free one hundred eight-page reprints, without covers, or the equivalent in pages in articles of greater length.

The Journal does not hold itself responsible for statements made by any contributor.

Communications should be addressed to The Boston Medical and Surgical Journal, 126 Massachusetts Ave., Boston, Mass.

### THE IMPORTANCE OF BLOOD CHEMISTRY TO THE CLINICIAN.

THERE can be no doubt that one of the outstanding features of medical progress during the past decade has been the tremendous interest taken in the chemical and physico-chemical study of the blood. The really phenomenal activity in this field of investigation has followed the introduction of accurate and relatively simple methods of study, largely through the work of Folin, S. R. Benedict, Bloor, Van Slyke and their associates. Perhaps the most important result of the development of their methods has been the stimulation of the investigation of disease in the living individual throughout the world.

If one takes a narrow view of the situation and asks what new tests are available to the physician for practical daily use as a result of all of the extensive studies of blood chemistry the answer may seem disappointing. But the same question may be asked of the pathologist, the immunologist, the pharmacologist or the physiologist and an equally disappointing answer returned. To take such a view is to miss the point of the entire purpose of medical investigation. To ask always for discoveries that are immediately useful in clinical diagnosis, prognosis and treatment is to betray a misunderstanding of the problem.

The situation with respect to blood chemistry is not unlike the situation with respect to electrocardiography or the study of basal metabolism. The occasion may not be frequent when a knowledge of the electrocardiogram or the basal metabolism of a patient is indispensable to his welfare, but no one can doubt the value of investigations in these fields in the explanation of signs and symptoms whose significance had previously been determined only empirically, if at all.

Thus the study of blood chemistry has confirmed and elaborated the modern theory of protein metabolism first formulated by Folin. It has given us a conception of the rate of utilization of sugar by the body and a conception of the intermediary metabolism of fat. We owe to L. J. Henderson our theory of the neutrality-regulating mechanism. The investigations of Bohr, Hasselbalch, Sørensen, Barcroft, Haldane and others in Europe, and in our own country those of Van Slyke, Y. Henderson and L. J. Henderson, have made possible the means of expressing in the form of a monogram the physico-chemical system representing the respiratory physiology of the blood.

If one doubts the value to the clinician of well-founded theories regarding the physiological chemistry of the blood, one should consider the enormous difficulties in the way of the purely clinical evaluation of empirical data. Thus, for example, the use of the carbon dioxide content of the venous blood as a measure of blood alkali has known nearly fifty years ago, and the failure of the method to be more generally used has been attributed to the difficulty of the technique. Following the perfection of a simple and accurate method by Van Slyke, extensive studies of the carbon dioxide content of the blood and of the carbon dioxide combining power of the plasma were made. Yet, nevertheless, it was the failure to comprehend the mechanism of acid-base equilibrium that led to the belief by many that a lowered carbon dioxide combining power always signified a condition of acidosis, a belief that gained foothold especially because of the low values found in outspoken diabetic acidosis. Yet quite aside from the clinical significance in diabetes of the lowered carbon dioxide combining power of the plasma, the further work of Y. Henderson, Van Slyke and L. J. Henderson makes it clear that the level of the carbon dioxide content of the blood tells us by itself nothing about the acid-base equilibrium. Thus, in lobar pneumonia, we may have very low values for the carbon dioxide content of the blood with a normal hydrogen ion concentration. On the other hand, a normal or even increased value for carbon dioxide content or combining power does not preclude a true acidosis in the sense of an abnormally high hydrogen ion con-



centration. Again, the absence of any adequate theory of sodium chloride metabolism at the present day renders difficult of interpretation the values obtained for the quantity of sodium chloride in the blood.

There are, however, a certain number of tests which from both physiological investigation and clinical experience have been definitely shown to be of everyday value. Of these perhaps the most important and most generally used are the determination of the total non-protein nitrogen, or urea nitrogen, content of the blood and the determination of the sugar content. Mention should also be made of the gasometric method of determining hemoglobin, which may be used for the standardization of clinical hemoglobinometers.

Much has been written but little has been proved about the clinical significance of abnormal quantities of uric acid and creatinine in the blood. A very high value for uric acid with a normal value for the non-protein nitrogen is probably highly suggestive of gout. To what extent an increase in the uric acid or an increase in the creatinine content of the blood is of significance in the diagnosis and prognosis, respectively, of chronic nephritis remains to be determined.

The total fat and acetone bodies of the blood have been extensively studied, especially, of course, in diabetes, but other than in this disease these determinations are certainly not frequently required.

Of the inorganic ions, bicarbonate, chloride, phosphate, and calcium have received the most attention. Unfortunately the methods for the determination of calcium are too difficult to execute with accuracy to have been used very widely, though probably the determination of calcium will prove to be of diagnostic and prognostic value in some conditions, especially in tetany, rickets, and perhaps in certain cases with delayed coagulation time of the blood. Despite the many excellent, rapid and simple methods for the determination of chloride ion in whole blood and plasma and in spite of the large number of analyses that have been made, we are as yet wholly in the dark concerning the significance of the level of sodium chloride in the blood. We shall probably continue to labor in the dark until we have some understanding of the physiological and chemical systems of which sodium chloride is a part. Although recent work would seem to indicate that phosphate determination may be of value in the study of rickets, for the most part the situation with respect to the various forms of phosphorus in the blood is much as it is with respect to sodium chloride. Certainly, the phosphate level in the blood is not a simple linear function, as is perhaps uric acid in gout, of any particular underlying pathology. Un-

til we know more about the relationship of the different phosphorous compounds to one another and to other substances in the blood we shall probably not make much headway.

Many attempts have been made to differentiate various types of disease by investigating the blood through physico-chemical means. From a purely clinical point of view not much success has attended these investigations. But the field has only recently attracted very widespread attention and there can be no question but that the application of physico-chemical methods to the study of the blood will yield important results, perhaps rather in the nature of explanations of clinical phenomena than in the nature of tests which will be of diagnostic or prognostic value.

The clinical importance of blood chemistry is thus threefold. It gives to the physician new weapons for the investigation of disease in living patients. It affords a basis for the explanation of many signs and symptoms. It provides him with a few new signs, chemical tests, which may at times be of the greatest assistance in diagnosis, prognosis, or treatment.

#### THE RED CROSS AND PUBLIC HEALTH WORK.

ALTHOUGH much publicity has been given to the purposes and achievements of the Red Cross and the material support contributed has been enormous and almost general throughout this country, some criticism of its work in certain departments has been expressed by men eminent in medicine. This attitude appears in concrete form in the Report of the Trustees of the American Medical Association. The Trustees recommend that the association take action to convince the American Red Cross that its public health activities are no longer necessary.

The work which has been more generally criticised has been that of the Red Cross nurse, and especially her relations with people in rural communities. It is generally conceded that these nurses have practised medicine to some extent and that physicians have felt annoyed by the injudicious zeal of these Red Cross representatives. These objectionable practices have not, however, been endorsed by the Red Cross, but have been followed by nurses who responded to the wishes of the laity. Both the nurses and the people have been blameworthy, but usually without any deliberate purpose to encourage unlawful acts.

The Red Cross realizes that harm has been done and recognizes that the unwise behavior of some nurses has been due to the natural ambition of a kind-hearted woman to relieve suffering. That such nurses have not been



thoroughly taught the proper relations of the nurse to the physician and patient is a reasonable explanation for that side of the question. So far as the patients are concerned, no one could reasonably expect the average person to see beyond the opportunity for the relief of minor ailments. Physicians and a considerable number of other persons know that a well-trained nurse is familiar with the simple problems of emergencies and can deal with them efficiently, and hence the laity will be apt to apply for relief to the most available agency. The physician responds when sent for, whereas the Red Cross nurse goes about among the people advising and teaching, and would often see evidences of some disorders for which medical attention had not been sought. Physicians know how she should conduct herself, but the nurse may not realize the inherent complication and may exceed her powers. Controversy follows and either the physician or the nurse is discredited and the community is divided. Reports of actual conditions furnish many illustrations of failure due to poor diplomacy and improper activity.

Recognizing all this, is it best to ask the Red Cross to retire from this particular field? Those who would argue for the abolishment of all forms of medical and nursing service by the Red Cross would probably contend that the functions of this great organization consist in meeting the emergencies of fire, flood, war, famine and kindred needs in a material way. That is, to succor, through such means as transportation, shelter, food and clothing, but to leave medicine and its coordinate agencies to other organizations.

This appears plausible, but there are reasons for other provisions than the preparation and storage of bedding, tents, clothing and surgical dressings. We do not know when the next great disaster will come, nor when organized violence may appear, and since preparedness applies to the problems of civil life as well as to national security, this unique organization should be prepared to function. One great difficulty in some emergencies has been the difficulty in securing or mobilizing nurses. The Red Cross has nurses and they should be in useful activity. If we demand a cessation of pioneer work by these nurses, how will they be kept in condition? Is it wise to send all of them back to private duty with an obligation to respond to the Red Cross call when needed? Could they be mobilized if distributed widely under the changing domiciliary conditions of a nurse's life? Probably not so readily as when serving under assignment, with record of location in a central office.

Are there not localities now without public health nurses where the Red Cross nurses may do valuable work? That the need of careful

training, according to ethical standards, exists, we may readily concede and advocate without contending for the retirement of Red Cross activities in many places.

Constructive criticism is sought by the Red Cross and efforts are now under way to secure advice which will lead to the elimination of the faults of the past and useful work in the future. It should be clearly kept in mind that the Red Cross does not attempt to control the public health nursing situation in any locality, but rather to work in fields where no other public health organizations are engaged, and, further, to transfer all activities to local bodies as soon as communities will take up this work.

The medical profession should carefully consider all the questions involved, before asking the Red Cross to recall its nurses from localities now inadequately served. If there are other questions involved in the recommendations of the Trustees of the A. M. A. they should be definitely stated, rather than implied by somewhat general statements.

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#### THE ATTITUDE OF THE STATE TOWARD THE DRUG ADDICT.

DURING the session of this year the Senate issued an order to the Department of Public Health for a report relative to facilities for the treatment and care of persons addicted to the use of narcotic drugs. The Department presented a report which gave a history of efforts at state control of the addict problem. In speaking of persons addicted to the intemperate use of narcotics the Commissioner states that "the basis of this treatment consists in the withdrawal of the drug and the building up physically and morally, as far as it may be possible, of persons under treatment for this condition. The first requisite is easy of accomplishment. The second is far more difficult, particularly as under our law all voluntary commitments may terminate upon three days' notice, and with rare exception the persons under treatment voluntarily will seek their release long before their physical and mental condition warrants it, finding further restraint irksome. It is almost the universal rule that persons returning to their former environment will sooner or later again seek readmission, setting up an 'endless chain' sort of procedure which achieves no result. It seems obvious, therefore, that the expenditure of the state's money for this ineffective treatment should not be continued, and that if the state is to undertake the care and treatment of persons addicted to the intemperate use of narcotic drugs, it should be upon such basis as would give the state an adequate chance for real success."

After an analysis of the functions of the various state institutions the Commissioner showed that all except one are not suitable for the development of a department adapted to the care of these unfortunate persons. Only in the state farm at Bridgewater can drug addicts be properly treated, for there is adequate space, and a competent medical director is in charge. A small additional appropriation for the Bridgewater institution would provide for all facilities and care of patients.

The Commissioner emphatically suggests that the drug addict should be under control for a sufficient period of time, and the operation of the present law interferes with necessary treatment, for under voluntary commitments the patient may elect to leave the hospital after a stay of a few days. Hence the recommendation was made that the present law should be amended so as to cut out the patients' privilege of leaving after three days. Since the Norfolk Hospital was loaned to the government for a period terminating in 1924 and is therefore not available, the following amendment to the law is also suggested:

"Any of the judges named in Section 50, or a judge of the municipal court of the city of Boston, may commit to the McLean Hospital, to the State Farm, or to a private licensed institution, by an order of commitment."

The report is creditable, but on May 11 the Senate voted "no legislation necessary."

This leaves Massachusetts in the same deplorable situation which has existed for several years.

#### NEWS ITEMS.

**THE LAWRENCE MEDICAL CLUB.**—The monthly meeting of the club was held Monday evening, May 22, with Dr. McAllister of Prospect Street. Dr. Merrill was chairman for the evening. The subject was "Impressions of Poland Gained While in Red Cross Service," the speaker being Dr. Snow of Newburyport.

**SUICIDES.**—Among the professions physicians head the list of suicides: 86 doctors, 57 judges, 37 bank presidents, 21 clergymen, 10 editors, 7 mayors and 7 members of legislatures took their own lives in this country in 1921. This record seems to indicate that occupational strain is greater in medicine than in other occupations.

**THE WESSON MATERNITY, SPRINGFIELD, MASS.**—This hospital has recently recorded the 10,000th case and the graduation of the 1000th pupil nurse. It was opened in December, 1908. Originally equipped for the care of 20 cases, it has now accommodations for 48. The de-

mand, however, exceeds the capacity. There are 24 single bed rooms, 16 beds in two and four-bed rooms and a ward of 8 beds. The original bequest was \$200,000 and an endowment of equal amount.

Until three years ago the hospital was self-supporting. During the first year 300 patients were admitted and in the last year there were 906; 9209 living infants have been born within its walls, and 428 premature infants have been given especial care.

Cæsarean section has been performed 126 times. The maternal deaths have been a little over one-half of one per cent.

This hospital is a so-called open hospital. Any physician may take advantage of its facilities, subject to its rules.

The pupil nurses, before being admitted, have had 18 months' training in general hospitals. The charges for patients vary from \$15 to \$56 per week, according to the accommodations desired. All patients paying less than \$35 per week participate in the charitable features of the hospital. No bequests or contributions have been received since the original ones by the late D. B. Wesson and it is hoped that public-spirited citizens will come forward and meet the deficiency now existing.

**THE SOLDIERS' HOSPITAL.**—In a recent editorial the Springfield *Republican* predicts the creation of a New England hospital for soldiers afflicted with mental and nervous ailments, as provided by the Langley bill.

The people of Northampton have offered a tract of land between the towns of Florence and Leeds. The government is considering the desirability of the use of this land rather than a location near Boston. Representative Paul H. Hines of South Boston has introduced an order protesting against the location in the western part of the state, basing his objections on the grounds that a majority of the patients would be from the eastern sections and that friends of patients would be inconvenienced by the length of travel imposed.

**DR. FRANCIS X. MAHONEY**, Health Commissioner of the city of Boston, attended the meeting of the American Medical Association at St. Louis, May 22 to 26. Dr. Mahoney was also elected a member of the committee on reorganization of the American Public Health Association, which held a section meeting at St. Louis during the same week.

**DR. B. W. CAREY**, Deputy Commissioner, State Department of Health, represented the State Department of Health at the meeting of the American Medical Association.

**REORGANIZATION OF THE EAR, NOSE AND THROAT DEPARTMENT OF THE BOSTON DISPEN-**

**SARY.**—Under a plan of reorganization in the Department of Diseases of the Ear, Nose and Throat of the Boston Dispensary, effective May 15, Dr. William E. Chenery and Dr. H. J. Inglis become surgeons-in-chief, each to be head of an independent six months' service. Dr. Inglis, who has already assumed charge of his service, will have the period February to July, inclusive. The period August to January, inclusive, will be taken by Dr. Chenery. Dr. Frederic C. Cobb, who for 35 years has served on the staff, and for the past 18 years as head of the department, has been appointed as consultant.

**DEATH RATE IN BOSTON.**—During the week ending May 20, 1922, the number of deaths reported was 198, against 193 last year, with a rate of 13.52. There were 23 deaths under one year of age, against 29 last year. The number of cases of principal reportable diseases were: Diphtheria, 54; scarlet fever, 51; measles, 236; whooping cough, 15; typhoid fever, 1; tuberculosis, 49. Included in the above were the following cases of non-residents: Diphtheria, 4; scarlet fever, 7; measles, 3; tuberculosis, 12. Total deaths from these diseases were: Diphtheria, 3; measles, 1; tuberculosis, 15. Included in the above were the following cases of non-residents: Tuberculosis, 4.

**ESSEX SOUTH DISTRICT MEDICAL SOCIETY.**—The following named officers were elected for the year 1922-1923: President, Dr. F. W. Baldwin, Danvers; vice-president, Dr. J. A. Shatswell, Beverly; secretary, Dr. R. E. Stone, Beverly; treasurer, Dr. G. Z. Goodell, Salem; librarian, Dr. C. M. Cobb, Lynn; commissioner of trials, Dr. J. E. Simpson, Salem; councillors, Dr. W. T. Hopkins, Lynn; Dr. J. W. Trask, Lynn; Dr. Loring Grimes, Swampscott; Dr. J. F. Donaldson, Salem; Dr. W. G. Phippen, Salem; Dr. A. N. Sargent, Salem; Dr. H. K. Foster, Peabody; Dr. J. F. Jordan, Peabody; Dr. G. M. Kline, Beverly; Dr. P. P. Johnson, Beverly; Dr. S. W. Mooring, Gloucester; nominating councillor, Dr. P. P. Johnson, Beverly; alternate nominating councillor, Dr. W. T. Hopkins, Lynn; censors, Dr. J. F. Donaldson (supervisor), Salem; Dr. C. L. Curtis, Salem; Dr. R. E. Foss, Peabody; Dr. A. T. Hawes, Lynn; Dr. H. P. Bennett, Swampscott; executive committee, Dr. C. M. Wilson, Salem; Dr. A. S. Torrey, Gloucester; Dr. G. H. Kirkpatrick, Lynn.

**FRANKLIN DISTRICT MEDICAL SOCIETY.**—The following named officers were elected at the

annual meeting held May 16, 1922: President, H. A. Sutor, South Deerfield; vice-president, F. A. Millett, Greenfield; secretary, Charles Moline, Sunderland; treasurer, Charles Moline, Sunderland; commissioner of trials, P. F. Leary, Turners Falls; censors, B. P. Croft (supervisor), Greenfield; C. L. Upton, Shelburne Falls; J. W. Cram, Colrain; H. N. Howe, Greenfield; A. E. Johnson, Jr., Greenfield; councillors, B. P. Croft, Greenfield; G. P. Twitchell, Greenfield; councillor for nominating committee, G. P. Twitchell (principal), Greenfield; B. P. Croft (alternate), Greenfield.

**DR. L. R. WILLIAMS**, formerly deputy commissioner of health of New York State and for the last four years director of the Rockefeller Commission on the Prevention of Tuberculosis, has been appointed managing director of the National Tuberculosis Association in the place of Dr. Charles J. Hatfield of Philadelphia, who resigned to give most of his time to tuberculosis work in Philadelphia.—*Science*.

**THE MASSACHUSETTS MEDICAL SOCIETY** this year has made every effort to make the coming meeting on June 13 and 14 one of great interest and of practical value. The programs of the section meetings have been carefully worked out to be of general interest and the demonstrations at the Medical School deserve a generous attendance. A record number of members is expected during the two days.

### Miscellany.

#### NARCOTIC DRUG SITUATION.

In an article published in *American Medicine*, Dr. Lester D. Volk, member of Congress from New York, states:

"One of the rottenest medical scandals in medical history was the promotion scheme and exploitation of the narcotic drug situation begun by an insurance agent, the strength of whose propaganda and advertising came from the support given him by men high up in the councils of medicine and in positions of control and power in medical organizations.

"The investigations of the Whitney committee (New York) placed things in their proper light and the resulting exposure halted activities along these lines. Since that time there has grown up a new coterie who have set themselves up as the all-knowing oracles in matters of narcotic addiction. . . .

"The profession must be distracted by no misleading issues. The narcotic question is of great interest, not only to the doctor but to the public and the nation as well.

"This is an economic problem of tremendous importance which becomes more important as the medical profession loses its grip upon its control.

"I have introduced a resolution in Congress asking for a full and free investigation on the subject of narcotic addiction, the method of handling and treatment by physicians, institutions and sanitariums, the effectiveness of the present laws, rules and regulations to control smuggling, trafficking and abuse of narcotic drugs, and for the purpose of drafting legislation for the control of this evil.

"Because of the facts which I have mentioned about the condition of affairs within the profession, the great need for knowledge upon all phases of this complex subject, every doctor, every medical society and every unbiased agency and organization looking toward a solution of this great problem should endorse this resolution."

#### NARCOTIC DRUG REGISTRATION.

MEMBERS of the medical profession are again renewing acquaintance with Uncle Sam. Through the Internal Revenue Bureau he is issuing annual notices and sounding warning for all to make their usual registration under the Harrison narcotic law or be subject to the numerous penalties inscribed for being delinquent.

The grand old gentleman of the plug hat and flowing goatee claims that the warning is necessary to the professional folk at this time as 1600 of them in Massachusetts alone let July 1 go by last year without attending to this duty, and consequently when they got in touch with Collector Malcolm E. Nichols' office they were taxed an additional 25 per cent.

There should be no delay in filling out the form and filing it this year. The Bureau is sending it out weeks in advance of the due date, July 1, with a reminder to the 7200 practitioners in the state who register in Class 3 at the rate of \$3 yearly, to attend to this important matter right away.

Applicants are further reminded that all those who register in Class 3 are required to register in Class 5 in order to dispense or deal in untaxed narcotic preparations, although no additional tax is necessary for this registration.

Class 3 applicants will forward with their application an inventory of non-exempt narcotic drugs and preparations in their possession on the date of application. This is necessary before the stamp is issued from the Bureau allowing them to continue prescribing or using narcotics under the Harrison Act.

#### MALARIA PARASITES.

AN interesting study of the length of life of the *Anopheles* and the duration of viability of the malarial plasmodium during its presence in the mosquito has been made by Bruer Mayne of the United States Public Health Service. His conclusions are as follows:

1. The longest period of survival of uninfected *Anopheles* kept under artificial conditions on a diet of split dates and water, at a temperature of 45° to 75° F., was 231 days. A lot of 85 specimens of *A. punctipennis* kept without blood lived an average of 90.4 days. Eight of these were kept a period of 175 to 203 days. In mosquitoes of this species, given one to three feedings of blood previous to a diet of fruit juices, 22 specimens averaged a longevity of 100 days, and six specimens lived 176 to 217 days. A single specimen of *Culex territans* survived 265 days on a diet exclusively of fruit juices at a temperature of 48° to 76° F.

2. Plasmodia of malaria distinctly recognizable by their morphology and staining were detected in the salivary glands of five specimens of *A. punctipennis*, 68, 70, 71, 83 and 92 days, respectively, after infection. These mosquitoes had been allowed to bite a crescent carrier on a single occasion and were maintained at room temperature (59° to 83° F.) for six days, then kept in a container registering temperatures of 44° to 78° F. for the remainder of the experiment.

3. Plasmodia of malaria proved to be viable by inoculation into a human host from the bite of a mosquito infected 55 days previously. Mosquitoes failed to convey malaria plasmodia through their biting, 61, 66 and 67 days, respectively, after becoming infected (gland sporozoites obtained). These three mosquitoes were kept under conditions identical with those in which viable sporozoites were demonstrated in the five specimens mentioned above.

#### CHANGES IN THE STATE DEPARTMENT OF PUBLIC HEALTH.

DR. FRANCIS A. FINNEGAN, State district health officer, has resigned to become director of hygiene of the city of Lowell, the resignation taking effect on February 15. Dr. Finnegan was appointed July 1, 1916, as district health officer of the Wachusett health district, with headquarters in Fitchburg.

Dr. Oscar A. Dudley, who is now serving as district health officer in the Berkshire district, is to be transferred to the Worcester county district to succeed Dr. Finnegan. Dr. Dudley served from December, 1919, to September, 1920, as district health officer of the Wachusett district.



Dr. Leland M. French, who has been epidemiologist in the central office of the department, since June, 1921, will be transferred to the Berkshire district to fill the vacancy caused by Dr. Dudley's change to the Worcester county district. An examination to fill the vacancy in the position of epidemiologist will be held April 3 and 4. The names of those passing the examination will be placed on an eligible list to fill future vacancies in the district health officer force and in the position of epidemiologist. Dr. French will continue as epidemiologist pending the result of the examination. A new appointment will probably be made about May 1 and Dr. French will take over the Berkshire district at this time.

Dr. Fredrika Moore has been connected with the Division of Hygiene, State Department of Public Health, since November 1, 1921, as pediatrician. Dr. Moore was graduated from Wellesley College and Boston University School of Medicine. She has served as a member of the staff of the children's department of the Massachusetts Homeopathic Hospital and as instructor in the Boston University School of Medicine. Dr. Moore has practised medicine in Winchester since completing her medical training, serving as a school physician, as director of tuberculosis work in the Winchester Board of Health, and as one of the directors of the Winchester Visiting Nurse Association.—*The Commonwealth*, January and February, 1922.

#### TUBERCULOSIS SCHOOL AT OTEEN, N. C.

A TUBERCULOSIS school similar to that held last year will be conducted by the United States Public Health Service from June 1 to 30 at the government sanatorium in Oteen, N. C. The class will consist of 30 medical officers and 30 nurses, who will be drawn for the most part from other Service hospitals. A few others who are identified with tuberculosis work in different parts of the country, although not employed by the government, will be admitted.

The first school, which graduated 22 physicians and 19 nurses who had been carefully selected from the 66 hospitals of the Service, was patterned after the summer school at Saranac Lake, N. Y., with necessary adaptations to the special work required.

Oteen hospital, with a capacity of 1100 beds, is near Asheville, N. C., and is conducted especially for tuberculosis patients. This delightfully situated and easily accessible sanitarium was built during the war by the army and was later turned over to the Public Health Service. It is in close proximity to the Public Health Service hospital at Biltmore.

#### DEFECTIVE VISION.

THE following suggestions are being sent broadcast from the Eye Sight Conservation Council of America, Times Building, New York City:

Your child's usefulness, happiness and success in life are dependent largely upon the care you give it, the watchfulness you keep over it, and the intelligence with which you guide it.

You are responsible to a great degree for the actions of its future, be they for good or bad. A child forms its habits from what it sees and the habits become a permanent part of its whole life.

If a child sees clearly he or she will think clearly. The eye is the mirror of the brain and if each image that the eye reflects on the brain is in proper perspective the impression made and concepts received will be correct. But if the vision is defective the impressions made and concepts received will be defective, and thoughts and opinions expressed will be distorted.

This is not only true of a child but it is true also of older people. The World War proved that about 29 per cent. of the young manhood of the nation between the ages of 21 and 31 years were suffering from defective vision.

The only way to correct this alarming condition is to adopt corrective treatment early in life. It is the mission of the Eye Sight Conservation Council of America, with headquarters in New York City, to acquaint the public with the great need for better vision.

#### PROTEST AGAINST THE PROPOSED TOOTH BRUSH TARIFF.

THE New York City Department of Health has issued a copy of a letter to the chairman of the Finance Committee, United States Senate, protesting against the duty on tooth brushes. The statement follows that there are less than a dozen manufacturers of tooth brushes in this country, and that imported tooth brushes meet the needs of the vast majority of our citizens in quality and price.

Further, that the cost of illness which would follow the omission of the use of the tooth brush would far outweigh any income from the proposed tariff. Such increase in cost would tend to nullify much work done by health departments all over the country, for a great deal of effort has been put forth in instructing people regarding the necessity of using the tooth brush.



# THE MANAGEMENT OF RESTAURANTS, LUNCH ROOMS, HOTELS AND PUBLIC COOKING ESTABLISHMENTS BY THE CITY OF QUINCY.

THE regulations adopted by the Department of Health of Quincy are ideal, for almost all possible requirements are in force which may remove the possibility of disease resulting from the preparation, storage and handling of food.

One very important feature is found in regulation number 9, which appears as follows:

9. The Health Commissioner may require any person intending to work in a restaurant, lunch room, hotel or other public cooking establishment to submit to a thorough examination to ascertain whether he is afflicted with any contagious, infectious or other disease or physical ailment. All such examinations shall be made at the expense of the Department of Health. Any person so examined may have his physician present at the examination.

This requirement is comforting, both because it appeals to the esthetic as well as the sanitary ideals of discriminating people. There are certain human carriers with potential dangers which are extremely unpleasant to consider. The enforcement of this regulation alone will be a great credit to the Health Department of Quincy.

This requirement has the force of law because it has been approved by the State Department of Public Health and the Attorney-General. Dr. F. E. Jones, Health Commissioner of Quincy, is entitled to great credit for the formulating of these regulations.

All the regulations may be found in the recent issue of *The Commonwealth* for January and February, 1922.

## RÉSUMÉ OF COMMUNICABLE DISEASES.

April, 1922.

### GENERAL PREVALENCE.

THERE were reported in April 8,516 cases of communicable diseases, as compared with 10,201 in March, a decrease of 1,685 cases. A general decrease in the total number of cases reported was evidenced in all of the common communicable diseases (chicken-pox, diphtheria, mumps and scarlet fever), with the exception of measles and German measles.

*Diphtheria* decreased in the number of cases reported from 718 in March to 581 in April.

*Dog-bite requiring anti-rabic treatment* was reported in 18 instances. This is a larger number than was reported in March, but it is in proportion to the steady increase in this condition which has been occurring for several months.

*Encephalitis lethargica* also is increasing in

incidence. In February there were 5 cases reported, in March 28, and in April 47. Investigation of all cases of this condition reported has not as yet added to our knowledge of the disease.

*Epidemic cerebrospinal meningitis* was reported in 15 instances. This is about the usual number of cases reported.

The number of cases of *German measles* is increasing slightly. The total for April was 89.

*Gonorrhea and syphilis* showed a slight decrease in the number of cases reported from the totals of last month, there being 373 and 181 cases respectively.

*Influenza* showed a marked decrease from 5,221 cases in February and 1,648 cases in March to 163 cases in April. Epidemic conditions have prevailed in previous years, since this disease was made reportable, and it is therefore impossible to judge whether or not this is the usual seasonal decrease.

*Measles* increased from 2,657 in March to 3,621 in April. A similar increase was noted in April, 1921.

*Mumps*. There were 506 cases of mumps reported during the month, a slight decrease from the total for March.

There were 528 cases of *lobar pneumonia* reported during the month, which shows a decrease of 460 cases.

*Scarlet fever* showed a decrease to 743 cases. This is nearly 200 less than the totals for January, February or March of this year.

*Tuberculosis, pulmonary, and tuberculosis, other forms*, were reported in about the usual numbers, there being 609 and 97 cases respectively.

*Typhoid fever* was reported in but 29 instances. This is the smallest number of typhoid fever cases to be reported in any one month since 1910 with the exception of February, 1920, when there were but 22 cases reported. The figures by months are not available previous to 1910, but it seems fair to say that February, 1920, and April, 1922, give the lowest figures since the disease was made reportable in this state.

*Whooping cough* decreased in number of cases reported from 523 in March to 339 in April. This figure is low when compared with that for April, 1921, when 707 cases were reported.

### RARE DISEASES.

*Anterior poliomyelitis* was reported from Boston, 2; Lynn, 1; total, 3.

*Dog-bite requiring anti-rabic treatment* was reported from Boston, 2; Cambridge, 1; Lowell, 10; Methuen, 1; Rowley, 2; South Hadley, 1; Winthrop, 1; total, 18.

*Dysentery* was reported from Springfield, 1. *Encephalitis lethargica* was reported from Boston, 21; Brockton, 3; Brookline, 1; Fall

River, 1; Chelsea, 1; Lawrence, 1; Lynn, 1; Marion, 1; Marshfield, 1; Millbury, 1; Newburyport, 2; North Brookfield, 1; Reading, 1; Springfield, 1; Waltham, 1; Watertown, 1; Woburn, 1; Worcester, 7; total, 47.

*Epidemic cerebrospinal meningitis* was reported from Brockton, 2; Cambridge, 2; Clinton, 1; Fall River, 2; Lawrence, 1; Medfield, 1; North Adams, 1; Lynn, 2; Revere, 1; West Springfield, 1; Woburn, 1; total, 15.

*Pellagra* was reported from Boston, 1; Waltham, 1; total, 2.

*Septic sore throat* was reported from Boston, 2; Greenfield, 2; Lynn, 1; Plymouth, 1; Somerville, 1; total, 7.

*Tetanus* was reported from Marlboro, 1.

*Trachoma* was reported from Boston, 4; Brockton, 1; Cambridge, 1; Melrose, 1; total, 7.

*Trichinosis* was reported from Holyoke, 1.

#### RADIUM INSURANCE.

THE United States Radium Corporation makes the following announcement in regard to insurance rates on radium:

"Dr. George E. Pfahler of Philadelphia, a few months ago, became very much interested in radium insurance because an announcement was made that Lloyd's of London had raised the annual premium to 5 per cent. Refer to editorial comment in the *Journal of Radiology*, Volume III, No. 4, April, 1922, page 145.

"Dr. Pfahler called for assistance of the radium producers in order to secure a radium policy that would give owners protection under all reasonable conditions, and he suggested that a policy obligating the company to pay 75 per cent. of any loss instead of 100 per cent. would doubtless give a more favorable rate and a coverage that would be acceptable to doctors.

"Working on this suggestion, we are pleased to announce that the Insurance Company of North America, a strong, old and reliable American insurance company, is prepared to write policies covering all risk, but with a loss payment of 75 per cent. This policy is offered at 2 per cent. per year.

"In developing this policy, a firm of insurance brokers in New York rendered very valuable assistance. We, therefore, take the liberty of suggesting that if you are interested in radium insurance, you communicate with Mr. O. M. Middleton of the firm of Alberti, Baird & Carleton, Inc., 50 Pine Street, New York. A request to Alberti, Baird & Carleton, Inc., will bring you a specimen policy.

"We have studied the radium insurance question for a long time and are glad to bring this policy to your attention since it has our complete approval."

#### THE PREVENTION OF RABIES.

BECAUSE of outbreaks of rabies in the cities and towns adjacent to Boston, and the fact that since last July there have been reported to the Health Department of the city of Boston nine cases of rabies and approximately 200 cases of dog-bite, it is deemed expedient to solicit the aid and coöperation of the public to the extent of having all dog owners notified that for a period of 90 days no dog should be allowed at large unless leashed.

In the prevention of the spread of rabies we consider this method more humane to the animal and just as efficacious in its results.

In addition, dog owners should be acquainted with the symptoms of rabies, and this information may be obtained on the back of the dog license issued by the Police Department.

F. X. MAHONEY, M.D.

#### THE DISCOVERY OF ETHER.

DR. JOHN B. DEEVER credits Long with the discovery of ether in 1842, in his address before the Medical Society of the State of New York, which met April 18, 19 and 20, 1922.

#### HEMOLYTIC SERA FROM FOWLS.

IN *Science*, May 19, 1922, Roscoe R. Hyde, of the School of Hygiene and Public Health of the Johns Hopkins University, refutes Citron's claim that the chicken is one of the best adapted animals for the production of hemolytic sera. He states that "in point of fact we find this animal one of the poorest hemolysin producers that have come within our experience."

#### INFANT MORTALITY.

THE Buffalo (N. Y.) Department of Health has published an analysis of the infant mortality of that city, showing that in 1890 the death rate under one year was 221.36 per 1000 births reported, and in 1921 the rate fell to 95.63. Through a process of eliminating the causes of death over which a health department has no control, the department contends that the death rate for cases due to preventable conditions is only 37.43, instead of 95.63.

The Health Commissioner has organized a committee consisting of obstetricians and pediatricists for the purpose of studying the entire subject. Especial attention will be given to the causes and prevention of still births and premature births.

## THE NORTHAMPTON STATE HOSPITAL.

THE report of this hospital for mental diseases for 1921 shows that the demand for beds exceeds the proper facilities, for, although the accommodations are recorded by the Department of Mental Diseases to be sufficient for about 820 patients, 1010 were supported in 1921, and it is expected that this number will be exceeded this present year. The trustees acknowledge serious overcrowding, which interferes with proper care of the patients.

The cost of maintenance has been reduced by about \$31.00 as compared with the preceding year. This is explained both because of the lessened cost of supplies and also by reason of an extreme shortage of help. At times there were about half the usual number of employees on the pay roll.

In the superintendent's report the statement is made that there has been a marked diminution in the number of cases in which alcohol was regarded as the chief cause of mental trouble. The study of the influence of internal glandular secretions on mental troubles has been continued, with encouraging results.

The detailed reports of the diseases under observation are of interest to students of mental disorders and show to all concerned in state problems the burdens imposed on society.

ALMOST twice as many men as women die from tuberculosis in New York City, according to statistics set forth by Godias J. Drolet in *The Journal of Industrial Hygiene*, compiled from the *Bulletin* of the New York Tuberculosis Association. From 63.1 per cent., the male death rate per 100,000 from this disease has decreased to 59 per cent. in 1920. The greater prevalence of the disease among men is ascribed to overwork and unhygienic workshops. Since 1917, when women entered industry in great numbers, there has been a noticeable increase in the female death rate.

THERE are one million drug addicts in the United States, according to estimates prepared by a committee appointed by the Secretary of the Treasury to investigate the use of drugs in the country. The report further states that only from 10 to 25 per cent. of the quantity of drugs imported is actually needed to supply the demands of legitimate medical purposes. Much of the distribution of the drugs is through "underground" channels.—*The Nation's Health*.

## RECENT DEATH.

JOHN JOSEPH HANLEY, a fellow of the Massachusetts Medical Society since 1896, died at his home in Southcroft, Motherwell, Scotland, July 26, 1921, on his 54th birthday. He is survived by his widow. Dr. Hanley was formerly a practitioner in Boston, having removed to Scotland in 1905.

## SOUTHERN MINNESOTA MEDICAL ASSOCIATION.

Mid-Summer meeting June 19th and 20th, 1922, at Rochester, Minnesota. Among the speakers from outside the state who will be guests of the Association and will appear on the Scientific Program are: Dr. W. B. Cannon, Boston, Massachusetts; Dr. Judson Daland, Philadelphia, Pennsylvania; Dr. Fred H. Albee, New York City, New York; Dr. William B. Coley, New York City, N. Y.; Dr. George E. Shambaugh, Chicago, Illinois; Dr. Willis Campbell, Memphis, Tennessee; Dr. Herman L. Kretschmer, Chicago, Illinois; Dr. Preston H. Hickey, Detroit, Michigan; Dr. Nathaniel G. Alcock, Iowa City, Iowa; Dr. George V. I. Brown, Milwaukee, Wisconsin; Dr. M. G. Seelig, St. Louis, Missouri; Dr. George W. Heuer, Cincinnati, Ohio.

The program for the forenoon sessions of Monday June 19th, and Tuesday, June 20th, will consist of Surgical and Medical Clinics, and Demonstrations in all departments at the following hospitals: St. Mary's Hospital, Colonial Hospital, Worrell Hospital, Curie Hospital, Olmstead Hospital, Clinic Building.

The program for the afternoon sessions will consist of Scientific Papers, and the Mid-Summer Banquet will be held at the Gymnasium, High School Building, Monday evening, June 19th, 1922, at 6 P. M.

Make hotel reservations early by addressing Mr. Roy Watson, Chairman Committee of Arrangements, Southern Minnesota Medical Association, Rochester, Minnesota.

The official program will be published by May 15 1922.

DR. H. W. MEYERDING, *Chairman*, Rochester.

## MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH.

REPORTED WEEK ENDING MAY 13, 1922.

Disease	No. of Cases	Disease	No. of Cases
Chicken-pox .....	100	Ophthalmia neonatorum .....	11
Diphtheria .....	125	Pellagra .....	2
Dog-bite requiring anti-rabic treatment .....	6	Pneumonia, lobar .....	117
Dysentery .....	2	Scarlet-fever .....	153
Encephalitis lethargica .....	12	Septic sore-throat .....	4
Epidemic cerebro-spinal meningitis .....	3	Syphilis .....	20
German measles .....	34	Suppurative conjunctivitis .....	9
Gonorrhea .....	82	Trachoma .....	1
Influenza .....	9	Tuberculosis, pulmonary .....	108
Malaria .....	2	Tuberculosis, other forms .....	29
Measles .....	1,025	Typhoid fever .....	10
Mumps .....	124	Whooping-cough .....	93

REPORTED WEEK ENDING MAY 20, 1922.

Disease	No. of Cases	Disease	No. of Cases
Antinomycosis ....	1	Ophthalmia neonatorum .....	8
Chicken-pox .....	109	Pneumonia, lobar .....	94
Diphtheria .....	122	Scarlet-fever .....	197
Dog-bite requiring anti-rabic treatment .....	7	Syphilis .....	31
Encephalitis lethargica .....	4	Suppurative conjunctivitis .....	18
Epidemic cerebro-spinal meningitis .....	3	Trachoma .....	4
German measles .....	21	Tuberculosis, pulmonary .....	167
Gonorrhea .....	83	Tuberculosis, other forms .....	17
Influenza .....	8	Typhoid .....	6
Measles .....	1,001	Whooping-cough ....	119
Mumps .....	153		

## Correspondence.

CONNECTICUT STATE MEDICAL SOCIETY,  
ANNUAL MEETING, MAY 17 AND 18.

Mr. Editor:

In company with Dr. Chase I attended the annual meeting of the Connecticut State Medical Society held in Bridgeport, May 17 and 18. In the morning of the 17th a meeting of the delegates from the various counties was held at which reports were heard from all the standing and numerous special committees, and a spirited discussion took place relative to the licensure of candidates by the Eclectic Board who had been refused license by the regular board, and the case of one individual had been worked out rather thoroughly, and resolutions were offered directing the committee on medical examination and medical education to take action to have that license recalled, and directing that that committee should take similar action on all other cases similarly licensed. The committee on history of the medical profession of Connecticut in the world war reported that their work of collecting data was progressing rapidly and soon would be ready for publication. They have gone into this matter quite thoroughly. They have adopted group insurance with the Aetna Insurance Company at a price much lower than we were able to obtain in Massachusetts. They had had no cases for medical defense throughout the year, and as there had been no meeting of the State Legislature during the year there was no work done by the committee on legislation. They showed a very prosperous financial condition.

The officers for the ensuing year are: President, David Russell Lyman, of Wallingford; vice-presidents, Samuel Pierson of Stamford, Conn., and Frederick T. Simpson, of Hartford; secretary, Charles Williams Comfort, Jr., of New Haven; treasurer, Phineas H. Ingalls, of Hartford. They show a membership of 1,077, being a gain of 11 during the year, and there are some 600 doctors in the state who are not members of the society.

There was considerable discussion relative to the codifying and amending of the medical practice act, and it was finally decided it would be better to take it up a small part at a time rather than to put the whole matter before the Legislature at any one session.

One of the interesting features of the meeting was the report by the secretary of each county society of the work done by that county during the year, including the meetings held, the work in their hospitals, and public health matters in general in their district.

In speaking of education of the public in medical matters, attention was called to the frequency with which articles written by physicians of good standing are placed in the papers alongside of advertisements of quack medicines.

Also mention was made of a movement for closer cooperation between the committee on National legislation and the national legislatures of the state. In the afternoon of Wednesday and Thursday very interesting scientific meetings were held, and during both mornings several clinics were held at each of the hospitals, including demonstration of some of the cases of smallpox which they have been having in Bridgeport.

On Wednesday evening a smoker was held at the University Club, at which serious entertainment was interspersed with much fun; while Thursday evening the annual banquet was held at the Hotel Stratfield, which was well attended, the principal address of the evening being by Dr. George E. Vincent, Presi-

dent of the Rockefeller Institute, whose subject was "Medical Education in Many Lands."

Yours very truly,

A. P. MERRILL,

Secretary, Berkshire District Medical Society.

## ALEPPO BOIL.

MAY 19, 1922.

Mr. Editor:

In the BOSTON MEDICAL AND SURGICAL JOURNAL for May 18th, there is an article on Aleppo Boil by Dr. A. K. Yoosuf which reveals a surprising lack of information regarding the etiology and treatment of the disease. It has long been generally accepted that Aleppo boil is caused by *Leishmania tropica*, an organism morphologically similar to that which causes kala-azar.

The organism was first adequately described by James Homer Wright<sup>1</sup> in 1903. He found it in a piece of tissue excised from a case of Aleppo boil in the Out-Patient Department of the Massachusetts General Hospital. This information can be found in an old edition of Manson's text-book on tropical medicine.

Recently published text-books on the subject recommend valuable methods of treatment not mentioned by Dr. Yoosuf. Both Manson<sup>2</sup> and Castellani<sup>3</sup>, for example, advocate the intravenous use of tartar emetic which, as many believe, acts as a specific against *Leishmania tropica*.

Yours sincerely,

G. C. SHATTUCK.

## REFERENCES.

- <sup>1</sup> Jour. of Med. Research, 1903-4, Vol. 5, p. 472.
- <sup>2</sup> Manson's Tropical Diseases, 7th ed., 1921, Manson-Bahr.
- <sup>3</sup> Manual of Tropical Medicine, 2d ed., 1919, Castellani and Chalmers.

## NOTICES.

MASSACHUSETTS ASSOCIATION OF ASSISTANT PHYSICIANS.—The next meeting of the Massachusetts Association of Assistant Physicians of the Department of Mental Diseases will be held at the Monson State Hospital, Palmer, Mass., on June 16, 1922. A program will be rendered by the members of the staff. Those arriving in the morning will have the opportunity of inspecting the institution.

BOSTON SANATORIUM, FORMERLY BOSTON CONSUMPTIVES' HOSPITAL. Name changed by City Ordinance, January 18, 1922. Trustees' office, 1001 City Hall Annex. Hospital, 249 River Street, Mattapan. Men, women and children, residents of Boston, in all stages of pulmonary tuberculosis, are admitted. Patients with non-pulmonary tuberculosis are admitted when there is room for them. Apply to the Superintendent of the Hospital, Dr. A. J. White, or to the Superintendent of Nurses of the Out-Patient Department, Miss Gardner, for admission. Out-Patient Department, 13 Dillaway St., Boston. Open on Mondays, Wednesdays, Fridays and Saturdays from 9 to 11 a.m., and on Monday evenings from 7 to 9 p.m. On Saturday mornings there is a special clinic for children. Telephones: Hospital, Milton 2310; O.P.D., Beach 3480 and 2040. Milton cars from Forest Hills pass the Hospital.

NEW YORK AND NEW ENGLAND ASSOCIATION RAILWAY SURGEONS.—The thirty-second annual session of the New York and New England Association Railway Surgeons will be held at the Hotel McAlpin, Broadway and 34th Street, New York City, on Saturday, October 28, 1922, under the presidency of Dr. Donald Guthrie of Sayre, Pa. A very attractive and interesting program is being arranged for this session.



## PUBLIC HEALTH LECTURERS FOR THE YEAR 1922.

The Committee on Public Health of the Massachusetts Medical Society has been able during the past three years to arrange with well known specialists in various medical fields to give talks at meetings of the District Medical Societies on subjects of interest and importance to all practitioners. It is a pleasure to announce that a similar arrangement has been made this year and that the gentlemen named below are willing, without expense to the District Society, to give occasional talks of thirty to forty minutes on subjects relating to the promotion of public health, extending opportunity for questions and discussion. It is suggested that medical societies consider meeting at neighboring public institutions, since such meetings have been most successful in the past, particularly at the tuberculosis sanatoria and state hospitals for the insane.

José Penteado Bill, M.D., Doctor of Public Health, Specialty: Preventive Medicine.

Frank C. Dunbar, M.D., Bacteriologist, Instructor in Bacteriology and Pathology, Tufts College Medical School.

Walter E. Fernald, M.D., Superintendent, Massachusetts School for the Feeble-minded.

Timothy Leary, M.D., Professor of Pathology, Tufts College Medical School; Medical Examiner, Suffolk County.

Edwin H. Place, M.D., Physician-in-Chief, South Department, Boston City Hospital. Specialty: Contagious Diseases.

C. Morton Smith, M.D., Chief of Department of Syphilis, Massachusetts General Hospital.

George Gilbert Smith, M.D., Assistant in Department of Genito-Urinary Diseases, Massachusetts General Hospital. Specialty: Genito-Urinary Diseases.

Leesley H. Spooner, M.D., on Staff of Out-Patient Department, Massachusetts General Hospital, Specialty: Specific Diagnosis and Treatment of Pneumonia.

William C. Woodward, M.D., Health Commissioner, City of Boston.

George H. Wright, D.M.D., Lecturer on Dental Hygiene, Harvard Dental School. Specialty: Dental Surgery.

Thomas F. Kenney, M.D., Director of School Hygiene, City of Worcester. Specialty: Full time School Health Officer.

Secretaries of District Medical Societies writing to ask for these lecturers will kindly designate the topic, the place and the hour of meeting as well as the name of the desired speaker, thus eliminating unnecessary correspondence. Please address communications to the Secretary of the Committee, Annie Lee Hamilton, M.D., 164 Longwood Ave., Boston 17.

[Note: The Committee on Public Health feels that this notice may have escaped attention, for few applications have been received. Each lecturer is an authority and would present his subject in an interesting and instructive manner.]

## NEW ENGLAND SURGICAL SOCIETY.

C. A. POSTER, *Pres.* P. E. TRUESDALE, *Sec.*

H. L. SMITH, *Vice-Pres.* P. P. JOHNSON, *Treas.*

## To the Members of the Society:

The fifth annual meeting will be held at Burlington, Vt., September 22 and 23, 1922, with headquarters at Hotel Vermont.

The following is a tentative outline of the program:

## FRIDAY.

9 A. M.—Operative Clinic, Mary Fletcher Hospital.

11 A. M.—Dry Clinic, Mary Fletcher Hospital.

12:30 P. M.—Lunch at Ethan Allen Club.

2 P. M.—Scientific program, Hotel Vermont, Roof Garden.

4 P. M.—Steamer Ticonderoga—Boat party to points of historic interest and rare scenic beauty on Lake Champlain.

7 P. M.—Annual dinner on board steamer Ticonderoga.

## SATURDAY.

9 A. M.—Reading of papers—Hotel Vermont.

12:30 P. M.—Lunch, etc., at Hotel Vermont.

2 P. M.—Completing the scientific program.

The invitation for the 1922 meeting to be held at Burlington has been most cordially extended by the Vermont members.

No part of New England is more picturesque and more memorable in American history. No section of New England is more worthy of a largely attended meeting. So plan to make September 21 and 22 a part of your vacation.

Members are invited to prepare papers for this meeting. The title of each paper should be in the hands of the secretary on or before June 1.

P. E. TRUESDALE, *Secretary*.

## CONGRES DES DERMATOLOGISTES ET SYPHILIGRAPHES.

A Congress of Dermatologists and Syphilologists, conducted in French, will take place in Paris on June 6th, 7th, and 8th, 1922, under the patronage of the Société Française de Dermatol. & Syphiligraphes.

Those eligible to regular membership in the Congress are: (a) Members of National Societies of Derm. & Syph.; (b) Doctors interested in Derm. & Syph.

Subscription to the Congress will be sixty francs.

The meeting will be held at the St. Louis Hospital at 9 A.M. and 2 P.M. At the morning meetings patients will be shown and special papers will be read. The afternoon sessions will be given to the discussion of the following papers:

1. Epidermomycoses (excluding ringworm of the scalp), M. le Dr. Petges (Bordeaux).

2. Subacute Inguinal Lymphogranuloma of Venereal Origin, M. le Prof. J. Nicolas et M. le Dr. Favre (Lyons).

3. Colloidales reactions in venous syphilis. Reactions to Colloidal Gold, to Gum Mastic, to Colloidal Benzoin, M. le Dr. Guy Laroche.

For the Committee,

HUDELO.

Communications and subscriptions to the Congress should be sent before May 15th, 1922, to M. le Dr. Hudelo, 8 rue d'Alger, Paris. Titles of papers, accompanied by a short résumé, should be sent to M. le Dr. Hudelo before May 1st.